

CHOOSING PROSPERITY

Maximizing Returns on Public Investment
in Workforce Development

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APRIL 1996

THE KENTUCKY LONG-TERM POLICY RESEARCH CENTER

Published By:

THE KENTUCKY LONG-TERM POLICY RESEARCH CENTER
1024 Capital Center Drive, Suite 310
Frankfort, Kentucky 40601

APRIL 1996

Library of Congress
Catalog Card Number:
96-075849

printed with state funds
available in alternative format upon request

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PREFACE

This report prepared as part of the Kentucky Long-Term Policy Research Center's continuing effort to understand the future implications of an array of trends affecting the Commonwealth. We focus here on trends affecting the workforce and on ways of leveraging higher returns on public investment in workforce development. This study should be of interest to policymakers and citizens alike who are concerned about long-term development of the Commonwealth, as measured by the competitiveness and productivity of workers and firms and the prosperity of its citizens.

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Michael T. Childress is the executive director of the Center. Those interested in further information about the Kentucky Long-Term Policy Research Center should contact his office directly:

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SUMMARY

Introduction

THE WORLD OF WORK and the complex economic system which envelops it are undergoing radical and inescapable change. Advances in communications technology have accelerated the pace of global commerce, minimizing the distances and differences that once complicated foreign trade. As a consequence, enterprises and entrepreneurs are now glimpsing the virtually unlimited expanse of markets, customers—and competition—that lies before them. In order to successfully negotiate the structural change now underway and seize the many opportunities it offers, new orders must emerge. Workplaces and workers must change, as well as the critical institutions which prepare them for entry and re-entry into the world of work.

In response to changes in the marketplace, new approaches to management are bringing critical focus to the organization of work and gradually transforming the dynamics of historically autocratic systems. The ranks of management are being thinned and reoriented, and unpre-

Hierarchical layers are melting away in the workplace, and learning is becoming central to our work lives, an ongoing process rather than a product we acquire and continue to use.

cedented responsibility is being extended to millions of frontline workers, many of whom can no longer rely on rote skills. Increasingly, they are expected to continue learning and acquiring skills, to think systemically, to analyze and solve problems, to work effectively in teams, and *to lead*.

As a result, the education paradigm of the past is fading. The order of education in youth, followed by gradual ascension through the ranks of a single organization, no longer prevails. Slowly, hierarchical layers are melting away in the workplace, and learning is becoming central to our work lives, an ongoing process rather than a product we acquire and continue to use.

In turn, labor force quality is fast becoming the linchpin of the international marketplace. Indeed, workforce quality, not the enticements of states, now drives

U.S. industrial locations.¹ Ultimately, the capacity of a firm's, a state's or a nation's workforce, the quality of the human capital it brings to the arena of world trade, will become the principal determinant of profitability *and* prosperity.

In spite of the gains we have made here in Kentucky, a significant skills gap remains. The challenge before the Commonwealth is made more difficult by the enduring legacy of poverty and by our historic reliance on agrarian, mining, and, later, manufacturing economies that did not require an educated labor force. While the issues surrounding the development of our labor force are complex, two questions will likely remain constant for some time:

- How do we achieve the proper balance between public and private responsibility for training and education?
- How do we leverage the highest possible returns from public investment in education and training for citizens of the Commonwealth?

Recognizing the unique strengths and weaknesses the Commonwealth brings to the challenge of developing the full potential of its labor force, we examine current assets and liabilities, the array of institutional responses we have brought to the challenge of workforce development, and ways of balancing differences between public and private roles and maximizing returns on investments in workforce development.

Assets and Liabilities

THE CURRENT STATUS of Kentucky's workforce is perhaps best described as transitional. On a number of fronts, we are moving rapidly to meet the challenge of the future and overcome a legacy of inattention to education, but the full benefit of these sweeping changes will not likely be realized for many years. It is estimated that 75 percent of Kentuckians who are on the job today will be below retirement age in the year 2010. At the same time, we have experienced substantial losses of our youth population that, in the absence of significant net in-migration, could deplete our future labor force. As a consequence, the quality of today's workers, the enterprises which employ them, and the teaching and training institutions which support them are key to the future.

The challenge of preparing our workforce is made more difficult by poverty, low workforce participation, and low educational achievement. Fewer than 57 percent (47th in the U.S.) of Kentucky's total working age population actively participates in the workforce, compared to a national rate of 67 percent.² The cause of this startlingly low rate can, in no small part, be traced to educational deficiencies. An

¹ Lyne, J., & Venable, T. (1992, February). IDRC's Palm Desert World Congress: work force focus draws record setting attendance. *Site Selection*, 74-80.

² Legislative Research Commission (LRC). (1992). *Demographic Trends as They Affect the Kentucky Workforce*. Frankfort, KY: LRC, 2.

estimated 54 percent of non-participating members of the labor force have less than a high school education, compared to only 19 percent of active participants.³

Kentucky's working age population remains undereducated by a number of measures; more than one-third (36 percent) of Kentuckians 25 years and older do not have a high school di-

ploma, compared to a national average of 24 percent. And, while Kentucky continues to chip away at the ranks of undereducated citizens through literacy training, GED preparation, and testing, participation has slowed. Anecdotal evidence also

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suggests that many high school graduates, particularly those who do not express an interest in college, are ill-prepared to meet the demands of today's workplace.

The future prosperity of working Kentuckians depends not only on the skills they bring to the workplace but the organizational strategies workplaces bring to the international marketplace. Many Kentucky firms have not organized socially or physically to achieve higher productivity and product quality. While some Kentucky plants, such as Ford, Toyota and Rohm & Haas, are model high-performance learning organizations, they are the exceptions. Instead, Kentucky is dominated by smaller, often under-capitalized enterprises. Many offer only low-skill, low-wage jobs. Consequently, even the best public sector efforts to supply skilled workers could be met with insufficient demand.

Answering the Challenge

*O*VER THE COMING YEARS, much of the responsibility for meeting the rising challenge of workforce development is expected to shift to the states. While state governments are already the primary administrators of education and training programs, the federal government controls both the purse strings and the programmatic parameters of many of the nation's job training programs. Those purse strings are expected to tighten as responsibility for decisionmaking expands. As a result, the Commonwealth will be challenged to adapt its present workforce development system to new fiscal and administrative realities and to discover more cost-efficient and effective strategies.

While the fiscal challenge remains unmet, remarkable consensus exists on the direction initiatives must take. Like other reform-minded states, many of Kentucky's efforts have been shaped by the findings of a 1990 report on the future of

³ Salzman, H., O'Hare, W.P., Crouch, R.T., and Schneider, E.A.. (1992). *Kentucky's Workforce: Preparing for the 21st Century*. Frankfort, KY: Cabinet for Workforce Development, 8.

education and training in America, prepared by the Commission on the Skills of the American Workforce for the National Center on Education and the Economy. The Commission concluded that a national system was needed to train workers and organizations for higher performance. It would include: a system for certification of mastery at all educational levels; systematic preparation for the skill standards of high-performance work organizations; programs and incentives to encourage businesses to adopt high-performance work organization; and a national labor market system.

Kentucky has begun to translate many of these concepts into its own policy initiatives, most notably, comprehensive school reform aimed at ensuring achievement of critical thinking skills. It is also moving to bridge school and work, streamline entry into Kentucky's education and training infrastructure, and prepare firms for the new demands of the marketplace.

Kentucky's workforce development system includes such traditional institutions as universities and community colleges, vocational and technical schools, apprenticeships, and on-the-job training, as well as the emerging school-to-work initiative and one-stop career development centers. Today, the state's post-secondary education and training system depends nearly equally upon federal funds and state general fund appropriations, 87 percent of which go to the wide range of institutions that comprise higher education. A substantial loss of federal funds earmarked for job training programs could have a potentially severe impact both on higher education and on programs administered by the Workforce Development Cabinet.

While the expected trends of diminishing federal funds and broadening competition for state funds may intensify institutional rivalry, they also underscore the absolute necessity of greater institutional effectiveness and efficiency.

Programs hardest hit by Congress' proposed "devolution" of power would obviously be those most reliant upon federal dollars. Workforce Development Cabinet programs, for example, rely heavily on federal funds, which now comprise about 80 percent of the Cabinet's overall budget. Among the Cabinet's programs, only the Kentucky Tech System depends primarily on state funds. While higher

education receives less than 10 percent of its funding from the federal government, the loss of any portion of those funds could drive tuition costs upward and possibly restrict access. Recent research concludes that California is already experiencing access problems that, in the absence of tuition cost reductions, will only worsen. Moreover, cuts in federally funded student loan programs could adversely affect higher education costs to students and taxpayers.

In spite of efforts to increase efficiency through collaborative relationships between agencies, a range of factors continues to undermine the unity of purpose, process and product that Kentucky's workforce development system must achieve. While the expected trends of diminishing federal funds and broadening competition for state funds may intensify institutional rivalry, they also underscore the absolute

necessity of greater institutional effectiveness and efficiency. At a minimum, the system must become far more collaborative. Ultimately, however, it may be necessary to restructure it in order to maintain critical workforce development initiatives and achieve higher returns on public investment.

Balancing Public and Private Roles

PUBLIC AND PRIVATE ROLES in workforce education and training are often blurred and uncertain. Moreover, the absence of an institutionalized bridge between workforce preparation and the real world of work continues to inhibit the effectiveness of both sectors. Private investments are often constrained by the demand for short-term returns that training and education seldom yield. While public investment generally seeks long-term, broad-based benefits, it is severely constrained by limited resources that may decline further, even as need expands. Consequently, striking the appropriate balance between public and private roles ranks among the most important challenges policymakers confront. In order to meet it, policymakers must discover ways of realizing the highest possible return on public investment and leveraging greater private involvement and commitment.

Perhaps the strongest deterrent to employer commitment to training is its enormous cost, especially for smaller firms that do not enjoy the economy of scale afforded larger firms. Indeed, the ability of firms to make costly investments in formal or informal training and development is tied directly to their size and relative wealth. In 1990, the Commission on the Skills of the American Workforce reported that only 0.5 percent of all American employers had spent \$27 of the \$30 billion invested nationally in workforce training and education and that only one-third of these training dollars was directed toward frontline, non-college educated workers,⁴ arguably those who need it most.

While offering little information about who receives training, more recent survey results suggest that the *incidence* of training among employers is relatively high but still considerably lower among smaller employers. According to a 1995 report on national survey results from the National Center on the Educational Quality of the Workforce, 81 percent of all establishments, regardless of size, provide formal classroom training while 97 percent provide informal, on-the-job training. Among firms with fewer than 50 employees, only 75 percent provided formal training while 96 percent provided on-the-job training.⁵

In spite of the clear and proven payoff that both education and training yield to employees and employers, private investment has been inhibited by a number of factors. For many firms, particularly smaller ones, training and education are viewed as risky investments with uncertain payoffs. Training does not always increase productivity, and concern about “pirating” of trained workers by other firms

⁴ Commission on the Skills of the American Workforce. (1990, June). *America's Choice: high skills or low wages?* Rochester, NY: National Center on Education and the Economy, 49.

⁵ Zemsky, R. and Iannozzi, M. (1995). A reality check: first findings from the EQW national employer survey. *EQW Issues*, National Center on the Educational Quality of the Workforce, University of Pennsylvania, 10:4-5.

continues to have a chilling effect on investments in human capital development. And, unlike workers in other countries, American workers exhibit minimal loyalty to firms, a circumstance that is likely to worsen as the employer-employee relationship is further strained by downsizing, stagnant wages and increased reliance on contingent workers.

On the other hand, accelerated competition has forced more and more firms to recognize that investment in training and education is key to survival. Moreover, as firms cooperate more extensively and continue to form networks for a range of purposes, more uniform human resource practices and shared commitments to training are likely to emerge.

In Kentucky, the school-to-work initiative is expected to have a significant impact on aligning public and private roles in the coming years. Established programs were also built on a cooperative public-private model. The Department of Technical Education and the University of Kentucky Community College System provide customized training programs by utilizing existing state facilities and resources to enhance the capacity of businesses, and Bluegrass State Skills Corporation (BSSC) provides matching capital for education and training. In recent years, however, BSSC has served a disproportionate number of large firms, in spite of the fact that 98 percent of Kentucky's firms employ fewer than 100 people.

The necessity of coordinating the design and delivery of a workforce development strategy is underscored by the specter of further limitations on already strained public resources *and* by expanding private need. Both the public and private sectors stand to benefit substantially from a more rational alignment of roles and the creation of an institutional bridge between the two. Striking the appropriate balance between public and private responsibilities for training and education and creating an institutional bridge are critical to future effectiveness.

Because the Commonwealth possesses limited resources, a *triage* approach appears to be in order, one that directs public investment to those areas where need is greatest and that broadly encourages private sector involvement. Policymakers should consider the following options:

- *First the Foundation.* Because a basic skills deficit constitutes the most formidable obstacle to the state's ability to compete and prosper, our full institutional focus should be trained on closing this critical gap. The provision of basic skills is arguably the primary public responsibility for workforce development, one that provides a foundation on which all citizens can build and offers the highest returns on public investment. It is also least likely to garner private sector investment.
- *Think Small.* Because our state is dominated by small firms and because virtually all recent job growth has occurred in a small number of rapidly growing small firms, public training investments should be targeted at them. Training investments in large firms, which generally do not need state assistance, should be reserved only for achievement of location or retention outcomes.

- *Build Networks.* In order to extend the reach of public resources and improve the competitiveness and productivity of firms, industrial networks must be encouraged and cultivated throughout the state.
- *Engage Stakeholders.* If the private sector is to become a full partner in training and education, it must be given a seat at the decisionmaking table. It is also critically important that decisionmaking be brought closer to those who best understand need and the capacity to meet it. While we have extended unprecedented authority to shape state economic development policy to majority private sector representation on the Economic Development Partnership Board, we have not fully engaged private sector representatives in a planning and policymaking role for workforce development, which profoundly influences their long-term viability and profitability. Legislation introduced in the 1994 session of the General Assembly, which resulted from a year-and-a-half effort, was designed to achieve the dual purposes of creating a bottom-up decisionmaking framework and engaging real stakeholders. This effort should be revisited, revised as needed, and shaped into timely legislation that will achieve greater stakeholder involvement and forge institutional links to local communities.

Maximizing Returns on Public Investment

IN ORDER TO REALIZE THE CRITICAL GOAL of developing the full potential of our workforce, we must fashion a holistic strategy for workforce development, one that addresses the unique needs of the Commonwealth, recognizing and accommodating social and economic circumstances. To do so, it will be necessary to establish a framework for policymaking that includes strategic focus, a foundation of knowledge that informs and guides policy, more efficient utilization of the resources we possess, a thoughtful reckoning with vexing structural issues, and concerted attention to the demand side of the education and training equation.

Without the requisite framework for policymaking, it seems unlikely that public efforts will achieve desired outcomes. Such a framework necessarily includes:

- *Strategic Vision.* As recommended by the Governor's Commission on Quality and Efficiency, the coordination of governance is essential.⁶ It requires a comprehensive, long-term, *interagency* strategic plan that establishes a vision, goals, strategies for their realization, and benchmarks for measuring progress.

⁶ Governor's Commission on Quality and Efficiency. (1993, November 1). *Workforce Training: Final Report and Recommendations*. Frankfort, KY: Office of the Governor.

- *“Institutional Intelligence.”* Across the board, policies and programs should be shaped by “institutional intelligence,”⁷ comprehensive quantitative and qualitative data that more precisely define and predict client bases, client needs, labor market conditions, economic conditions, program capacity, program outcomes, etc.
- *Resource Maximization.* Planning should also be informed by systematic attention to under-utilized technological resources, including Kentucky Educational Television and the state’s advancing information super-highway. Full utilization of distance learning opportunities could help close obstacles posed by rural isolation, inadequate transportation, and single-parent family responsibilities. Moreover, these tools could enable participants to enter education and training at an appropriate level and progress accordingly.

Structural Change. Critical attention must be brought to questions of institutional effectiveness and organization. While virtually every factor that traditionally compels attention to restructuring has surfaced publicly in Kentucky during recent years, needed change will not likely be achieved by merely realigning hierarchies. Rather, the very culture of organizations must be changed. Organizational change is difficult, costly, time-consuming work, but necessary work. While some structural changes are logical and reasonable, other institutions must change from within. Consequently, it is critically important that efforts to reorganize be based upon a solid foundation of timely information.

It is, however, both logical and practical to continue alignment of Kentucky’s workforce development initiatives by moving the Bluegrass State Skills Corporation to the Workforce Development Cabinet. While BSSC’s engagement of private sector representatives offers a model worthy of replication, a disproportionate number of its training grants have gone to larger firms in recent years. Further, the policy of providing funds to agencies that are outside of their purview and that effectively preclude the necessity of routine interagency collaboration appears to be unwise.

Merger of the Community College System with the Kentucky Tech System by legislative mandate, however, will not necessarily improve outcomes. Before such a merger is seriously considered, more needs to be learned about the client bases and capabilities of both systems. There is serious concern that a merger could effectively eliminate the vital educational entry point the vocational-technical schools now provide, one that must be addressed. Further, organizational change is costly, time-consuming and often requires protracted periods of adjustment, resulting in lost institutional effectiveness. Policymakers should give serious consideration to fostering change and possibly a merger at the local level through the use of financial incentives to reward collaboration and cooperation.

⁷ Fosler, R. S. (1992, February). State economic policy: the emerging paradigm. *Economic Development Quarterly*, 6:3.

Policymakers should also thoughtfully visit the issue of the community college link to the University of Kentucky. At question is whether this organizational structure achieves the goal of elevating the overall quality of education without diminishing customer access and service to communities. The prevailing national model is that of an independent community college system focused principally on horizontal relationships within a service area. While few systems or individual community colleges are cited as models by experts, diverse services aimed at a regional client base with different educational foundations is regarded as ideal.

Before making sweeping organizational changes, policymakers should seek the guidance and recommendations of nationally recognized consultants who possess substantial expertise in education organization. An independent outside evaluation of the present organizational structure by a third party, preferably a panel of experts from diverse backgrounds and regions, would offer the least politicized and potentially the most beneficial guidance on difficult issues.

Finally, policymakers must confront the formidable challenge of leveraging higher performance from publicly supported institutions of higher education. In recent years, dramatic increases in tuition or user fees have prompted widespread concern about cost and access to higher education. At the same time, increasing attention must be paid to the needs of the “new majority,” members of the workforce with limited time and opportunity for education. Performance goals for higher education must systematically recognize and determine the effectiveness of Kentucky’s public universities.

Critical to continued effectiveness is cost reduction. Because institutions of higher education face an almost certain future of declining reliance upon public revenues, they must engage in organizational change. To leverage such engagement, policymakers should strongly consider tying substantial funding incentives *and* disincentives to demonstrated commitments to organizational change, to successful tuition reduction strategies, to the full integration of technology into the educational process, to creative and substantive measures of student outcomes, and to the development of timely responses to the needs of working-age Kentuckians.

The Imperative of High Performance Organization. Because any workforce development strategy must address the demand side of the equation, strong public focus must be brought to the cultivation of “high-performance organizations,” enterprises which are organized to capture the full potential of their most valuable resource—human capital. Research offers powerful evidence that organizational change in the private sector is in the public interest. It enables higher levels of productivity and product quality; improves competitiveness; increases the likelihood of a firm’s survival; enhances the quality of work life; and imparts important and transferable community-building skills, such as leadership, teamwork and problem-solving.

Because organizational change is now so closely linked to the capacity of firms to compete in the global marketplace, many argue that, in its absence, public investment in workplace training will not yield dividends. Consequently, the advancement of high-performance organizations is becoming a central public strategy

for workforce development, one the Commonwealth should move rapidly to make a priority. Moreover, state government should act as an exemplar, moving quickly toward high-performance organization, maximum efficiency and internal productivity.

Conclusion

LIKE OTHER STATES, Kentucky seeks to create a responsive, fully integrated workforce development system of the highest quality. Clearly, however, much work is left to be done. Reform efforts continue to be hamstrung by traditions that inhibit our very capacity to change, as well as our ability to benefit from change. But the pressure for change is unlikely to abate. Public institutions must respond by making many of the same adaptive organizational changes underway in the private sector. While organizational change is difficult, time-consuming and sometimes painful, the future capacity of Kentucky's workforce and the future prosperity of the citizens of the Commonwealth may depend on how rapidly we adapt to the demanding context in which we live.

Realization of the ideal "system" for workforce development, unfortunately, is not enough to ensure broad prosperity. Instead, many observers suggest that we also must rebuild and restructure fundamental relationships in our society, particularly the employee-employer relationship. Even as we discover more about the very direct role this relationship plays in profitability and productivity, it is being severely eroded in the United States. The long-term implications are disturbing.

Consequently, part of the work of capturing the fullest potential of Kentucky's, indeed the nation's, workforce involves rebuilding and strengthening the social relationships on which our economic strength depends. To do so, we must encourage and enable employers to choose the high road, to commit to education, training, participatory management, increased employment security and shared gains for workers.

Clearly, prosperity is not merely a choice. Instead, it is the product of outcome-oriented action. In this case, that action must be focused on the development of a highly skilled workforce *and* on the cultivation of economic and social circumstances that will enable broad prosperity over the long term. The stakes are perhaps higher than ever before. The prosperity that has eluded the Commonwealth's grasp throughout the 20th Century is the potential return on this investment of political and institutional will.

While no investment strategy comes with a written guarantee of returns, the absence of one, in this case, does. Without knowledge and the skill it enables, the working people of Kentucky face a bleak economic future. Peter F. Drucker envisions the future as one in which knowledge workers ultimately will reckon with the "social challenge" of how to treat non-knowledge workers.⁸ Rather than become the

⁸ Drucker, P.F. (1994, November) The age of social transformation. *The Atlantic Monthly*, 67.

focus of a new social challenge, we envision a future in which Kentuckians will figure prominently among those leaders who will shape a fair and just society.

ACKNOWLEDGMENTS

The Kentucky Long-Term Policy Research Center wishes to acknowledge the many individuals whose contributions helped to make this document a more comprehensive discussion of issues surrounding public investment in workforce development.

As always, we are grateful to members of the Kentucky Long-Term Policy Research Center's Board of Directors for their thoughtful consideration of this report and their continuing and enthusiastic support of our work.

We also wish to acknowledge those individuals who took time from their busy work lives to review and comment on this report. Their contributions to its accuracy, fairness and completeness are most appreciated. They include: Rodney "Biz" Cain, Ben Carr, Ken Carroll, Gary S. Cox, Michael Gardone, Bob Green, Kim Haydon, John Hicks, William Huston, Kris Kimel, Anthony Newberry, Joe Nor-sworthy, Roy Peterson, Teresa Suter, and Dennis L. Taulbee. We also wish to thank Karla J. Howell and Jare Schneider for their editorial contributions.

The Center also wishes to once again acknowledge the fine work of the interns who contributed to this report. Their knowledge and ability are a testament to the quality of Kentucky's workforce development system, and their contributions have significantly expanded the capacity of our small agency.

Finally, this report, like all other products of the Kentucky Long-Term Research Center is the result of teamwork and cooperation. Every member of our small agency contributed to it in some way. Our executive director, Michael Childress, helped discover and shape its findings, and Peter Schirmer and Billie Sebastian provided much-appreciated editorial support.

While many individuals contributed to the development of this report, the Center assumes full responsibility for its content.

INTRODUCTION

... the emerging society ... is the first society in which ordinary people—and that means most people—do not earn their daily bread by the sweat of their brow ... This is far more than a social change. It is a change in the human condition.

Peter F. Drucker

THE WORLD OF WORK and the complex economic system which envelops it are undergoing radical and virtually inescapable change. Few of us will remain isolated from its impact, no matter where we live. Advances in communications technology have accelerated the pace of global commerce, minimizing the distances and differences that once complicated foreign trade. Gradually, international trade agreements and computer software that will soon enable real-time language translation⁹ are expected to dissolve lingering obstacles to globalism. Enterprises and entrepreneurs are now glimpsing the virtually unlimited expanse of markets, customers—and competition—that lies before them. Many have already begun to experience the perils and profits of the new world marketplace and to grasp the now critical importance of how we work.

Perhaps only the Industrial Revolution, which ended the last century with dramatic and disquieting change, offers a comparable transition. In recent decades, our nation's industrial workforce has contracted "faster and further" than any in the world, even as U.S. production increased more than in any nation but Japan.¹⁰ As history attests, such dramatic structural realignment compels difficult, often painful adaptation. Once valued skills and services are no longer needed; previously vibrant enterprises fade and die; and institutions with long histories of public service are rendered irrelevant and obsolete. In order to negotiate the structural change underway and seize the opportunities it offers, comfortable habits of mind must be abandoned. New social and economic orders must emerge. Workplaces and workers must

⁹ Cetron, M. (1994, May 10). Trends of the future (speech). Communities of the Future Conference, Bowling Green, KY.

¹⁰ Drucker, 62.

change, as well as the critical institutions which prepare individuals for entry and re-entry into the world of work.

While adaptation to change is a gradual process, significant shifts are nevertheless underway. New approaches to management are bringing critical focus to the organization of work and are gradually transforming historically autocratic systems. The ranks of management are being thinned and reoriented, and unprecedented responsibility is being extended to millions of frontline workers, many of whom can no longer rely on rote skills. Increasingly, they are expected to continue learning and acquiring skills, to think systemically, to analyze and solve problems, to work effectively in teams, and *to lead*.

At the same time, the educational paradigm of the past is fading. The order of education in youth followed by gradual ascension through the ranks of a single organization no longer prevails. Slowly, hierarchical layers are melting away, and learning is becoming central to every work life, an ongoing process rather than a product we acquire and continue to use.

In turn, labor force quality is fast becoming the linchpin of the international marketplace. The economic growth and wealth of nations has become closely linked to the education of its citizens,¹¹ just as the success of an individual firm is increasingly dependent upon the quality of its labor force. Indeed, workforce quality, not the enticements of states, now drives U.S. industrial locations.¹² Ultimately, the capacity of a firm's, a state's or a nation's workforce will become the principal determinant of profitability and prosperity.

For workers and enterprises, the education payoff is already substantial. According to the National Center on the Educational Quality of the Workforce (EQW) at the University of Pennsylvania, investments in education yield a "double payoff"; workers not only receive a well-documented 8 percent return on every year of education in the form of higher wages, employers realize an 8.6 percent gain in productivity with each additional year of schooling.¹³ A national employer survey conducted by the Census Bureau for EQW found that employers actually enjoy a greater return in productivity from a 10 percent increase, roughly one year, in worker education (8.6 percent return), than from 10 percent increases in hours worked (5.6 percent return) or capital stock (3.4 percent return). "The effect rises to 11 percent for

¹¹ Sturm, R. (1993) *How Do Education and Training Affect a Country's Economic Performance? A Literature Survey*. Santa Monica, CA: RAND Corporation.

¹² Lyne and Venable.

¹³ National Center on the Education Quality of the Workforce (NCEQW). (1995). The other shoe: education's contribution to the productivity of establishments. *EQW Results*, University of Pennsylvania, 2.

the non-manufacturing sector—nearly three times the boost for a similar increase in capital stock,” the Center found.¹⁴

A *AGAINST A BACKDROP* of urgent national dialogue, states such as ours are rushing to adapt institutions to structural change, sometimes in a piecemeal fashion. In Kentucky, however, we have made important and widely lauded efforts to consolidate many of our workforce training efforts under a single cabinet, a move that has brought critical focus to policy that will figure prominently in shaping our future. While full integration of our education and training systems has yet to be achieved, the present structure could prove fortuitous given the strong likelihood of dramatically changed and reduced federal funding streams.

Additionally, Kentucky has been awarded federal grants to launch a statewide school-to-work initiative and to establish one-stop career centers. The latter will place emphasis on the needs of individuals now in the labor force by providing citizen-customers with critical information about career options, easing their entry into training and education, and ultimately, strengthening our base of information about the effectiveness of our delivery systems.

In spite of the significant gains we have made, a substantial skills gap remains to be closed. The challenge before the Commonwealth is made more difficult by our

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historic reliance on agrarian, mining, and, later, manufacturing economies that did not require an educated labor force. Indeed, our state and even our nation, which enjoyed a long history of virtually uncontested manufacturing prowess, come belatedly to the realization that quality education and preparation for work must become a national expectation.

While we have begun to lay the critical foundation for a quality system of elementary and secondary education here in Kentucky, its full benefit will not be realized for many years to come. It is estimated that 75 percent of Kentuckians who are on the job today will be below retirement age in the year 2010. Consequently, concerted attention to improving the educational foundation and the skills of our present labor force is critically important to our future. Additionally, we have experienced substantial losses of youth popu-

¹⁴ Ibid., 2.

lation that, in the absence of significant net in-migration, could deplete our future labor force.

Kentucky also confronts the difficult challenge of integrating a substantial portion of the population that has been marginalized by poverty into a system of learning. This may prove to be the Commonwealth's, indeed the nation's, most formidable challenge, one that will continue for decades to come, as significant numbers of today's children live in poverty. Those who are reared in poverty are far more likely to be alienated from formal educational institutions and far less likely to enjoy a social support system that might enable and sustain re-entry. Moreover, many remain outside formal work systems where much of the current training focus lies. Regardless of the difficulty of raising workforce productivity and participation, the potential benefits to society as a whole, as well as to individuals and their families, compel public attention and investment.

While the issues surrounding the development of our labor force are complex, fundamental questions lie at their core. We should expect answers to these questions to change as our understanding of best practice is enriched and as the needs of individuals and enterprises change. As we pursue "institutional intelligence"¹⁵ about public need and the most effective ways of meeting it, two questions will likely remain constant:

- How do we achieve the proper balance between public and private responsibility for training and education?
- How do we leverage the highest possible returns for citizens of the Commonwealth from public investment in education and training?

We approach these questions with the understanding that, while similar to those of many states, the needs of Kentucky are unique. Aligning public policy with the challenge of meeting those unique needs is the focus of this report.

We begin this report with an assessment of our current situation: Kentucky's assets and liabilities, the present status of Kentucky's workforce and our responses to the need for workforce education and training. We then address the issue of balancing public and private responsibilities for workforce training. We conclude by exploring strategies to maximize returns on public investment.

¹⁵ Fosler, 10.

ASSETS AND LIABILITIES

THE CURRENT STATUS of Kentucky's workforce is perhaps best described as transitional. On a number of fronts, we are moving rapidly to meet the challenge of the future and overcome a legacy of inattention to education. But, more so than in any other region of the nation, the mantle of undereducation and poverty weighs heavily on the South. It is particularly burdensome for Kentucky, which has trailed most southern states in educational achievement throughout much of this century. As a result, the Commonwealth is not only challenged to close education and training gaps but also to build a culture of learning on an historically weak foundation.

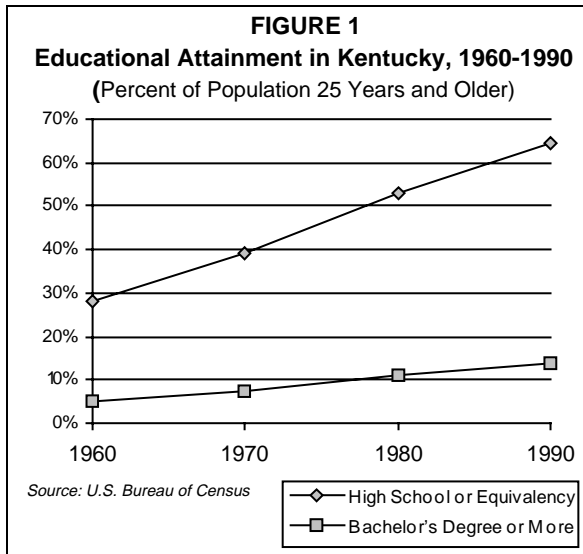
In spite of impressive gains on a number of human capital-building fronts, many working age Kentuckians remain undereducated and qualified only for low-skill, low-wage jobs. While

it holds enormous long-term promise for today's elementary and secondary students, the Kentucky Education Reform Act (KERA) may not be enough to change the face of the Com-

Prosperity over the long term may hinge on how effectively and how quickly we elevate the capabilities of today's workers.

monwealth's future. The vast majority of today's workers did not benefit from KERA. An aging population and a significant 1980-1990 decline in the state's youth population, which could deplete our future labor force, underscore the importance of workers who are already on the job.

As a consequence, the quality of today's labor force, the enterprises which serve as the engine of our economy, and the teaching and training institutions which support them are key to the future. Together, these factors will determine whether the Commonwealth cultivates, retains, and attracts high-skill, high-wage enterprises. In short, prosperity over the long term may hinge on how effectively and how quickly we elevate the capabilities of today's workers.



As illustrated, Kentucky has made significant educational gains over the past 30 years, but the state's working age population remains undereducated by a number of measures. Most notably, the 1990 U.S. Census found that more than one-third (36 percent) of Kentuckians 25 years and older did not have a high school diploma, compared to a national average of 24 percent. Consequently, a substantial portion of the state's population possesses only

limited literacy capacity. The extent of the limitations posed by illiteracy and limited literacy capacity will be more precisely determined by a comprehensive statewide survey conducted for the Workforce Development Cabinet, the results of which are now being analyzed by the University of Kentucky's Martin School of Public Administration. Nationally, the federal government estimates that illiteracy costs U.S. businesses \$225 billion a year in lost productivity.¹⁶ In states with low literacy capacity, such costs are likely to be disproportionately higher.

While there is no assurance that a diploma or even a degree, for that matter, ensures basic skills, this standard measure of capacity is likely to improve in the Commonwealth. Kentucky's adult population without a high school diploma will, in all likelihood, continue to decline, perhaps sharply, over the coming years. Population estimates from the 1990 US Census show, for example, that 41.7 percent of Kentuckians who did not possess a high school diploma in 1990 were age 60 or older. Moreover, the majority (56.8 percent) of those Kentuckians who have received the least formal education, no more than eight years, were 60 years or older in 1990. Both the value placed on education and the educational achievement of Kentuckians are clearly rising among younger generations.

According to data compiled by the Department for Adult Education and Literacy, Kentucky continues to chip away at the ranks of undereducated citizens through literacy training, GED preparation, and testing. While the rates of successful completion of GED tests have declined since the test was re-

¹⁶ Reese, S. (1996, April). Illiteracy at work. *American Demographics*, 14-15.

vised in 1988 to assess critical thinking skills and writing ability, 179,207 Kentuckians were awarded GED certificates between 1980 and 1994. Many more are now in preparatory phases.

From 1985 to 1987, Kentucky led the nation with a 24 percent increase in the ranks of those taking the GED test. This period of expanded participation underscores the importance of raising public awareness of the correlation between formal schooling and wage levels. While increased testing during the period is attributed in part to knowledge of planned revisions to the test that would increase its difficulty, the larger context also served to reinforce the growing connection between high skills and high wages. The Toyota plant, which was announced in 1986, brought a substantial block of jobs to Kentucky that were out of reach for those without a high school education. A strong private sector emphasis on GED testing and activist state officials also helped push participation levels during the period.

Anecdotal evidence, however, suggests that too many high school graduates, particularly those who do not express an interest in college, are poorly prepared to meet the demands of today's workplace, a problem that is not unique to Kentucky. While high-school graduates of the past were often able to prosper in manufacturing jobs that required only the basic skills acquired in high school, today's high-wage jobs demand post-secondary training beyond high school or, at a minimum, a strong foundation in communications and math, as well as computer skills. Unfortunately, too few graduates have that foundation in place.

A recent *Wall Street Journal* article, for example, detailed searches by manufacturers for qualified applicants and the subsequent rejection of huge pools of poorly prepared high school graduates. In Owensboro, Kentucky, only 10,000 or 70.5 percent of 14,176 applicants for work at Scott Paper Company's new tissue production plant passed an initial screening. Another 4,000 of those applicants failed a standardized English and high school algebra test.¹⁷

Further evidence of deficits was found by the Kentucky Science and Technology Council in a series of workplace focus groups and on-site interviews involving organizational leaders, managers, and workers. They identified "significant and pervasive" deficiencies in reading, mathematics, teamwork, communication, facilitation of work among employees, and the willingness to change and learn new things.¹⁸ Many employers cited the inability of workers—traditionally trained to take direction and perform one

¹⁷ Narisetti, R. (1995, September 8). Manufacturers decry a shortage of workers while rejecting many. *The Wall Street Journal*, A1, A4.

¹⁸ Daly, B., Hackbart, M., Kimel, K., Miller, K., and Straus, C. (1994). *Creating the High Performance State*. Lexington, KY: Kentucky Science and Technology Council, 20.

task—to learn new things and think for themselves as the attribute most likely to obstruct the path to high performance. For example, one Kentucky CEO observed:

*The traditional education system was built around a model of management that we have practiced for many years—one that does not empower. Within this global economy, our needs change faster than educational systems can . . . [As a result] we have to retrain and re-educate employees we thought were educated when they came to us.*¹⁹

Observations such as these not only underscore the shortcomings of new workplace entrants but also those of firms that have not undergone organizational change. The cultivation of "high-performance" firms, those which are socially and physically organized to achieve maximum productivity and product quality, helps ensure a demand for highly skilled and highly paid workers. Unfortunately, many Kentucky firms have not undergone the organizational change that global competition demands, creating a potential gap between supply and demand for skilled workers.

Aside from the undereducation and poor adaptive skills of the current workforce, an additional cause for concern is workforce participation. Less than 57 percent (47th in the U.S.) of Kentucky's total working age population is counted among workforce participants, compared to a national rate of 67 percent.²⁰ The cause of this startlingly low workforce participation rate can, in no small part, be traced to educational deficiencies. An estimated 54 percent of nonparticipating members of the labor force have less than a high school education, compared to only 19 percent of active participants.²¹ Reaching nonparticipants who are outside of formal work systems poses a particularly difficult challenge.

On a brighter note, Kentucky's workforce has demonstrated in several arenas that, with appropriate training in a high-performance environment, it can indeed produce globally competitive results. More than a decade ago, Ford's Louisville Assembly Plant committed to organizational change and, in the process, expanded education and training that enabled employees to transform ideas into innovations. The plant, which appeared to be headed toward closure in the early 1980s, was transformed into a model of quality and productivity. It has subsequently undergone significant expansion as demand for its products continues to escalate. Today, Louisville workers build two of Ford's most popular models.

¹⁹ Daly et al., 23.

²⁰ LRC (1992), 2.

²¹ Salzman et al., 8.

The Toyota plant in Georgetown continues to serve as an international exemplar of quality, efficiency and performance, as it has since operations began in 1988. Its Kentucky employees, who receive between 40 and 50 hours of classroom training each year plus continual on-the-job training, have been credited by the company's CEO with world-class productivity, among the best of Toyota's many operations.

After spending an estimated \$400,000 to identify its current staff of 230 employees, the Scott Paper Company has also garnered impressive results in Kentucky. By providing employees with at least 740 hours of intensive training in topics ranging from use of Microsoft Windows software and lab tests for fiber strength, to operating forklifts and handling confrontations with co-workers, Scott was able to successfully implement a strategy to pare management and, in doing so, limit staff needs to half those at comparable production facilities.²²

While improvements in public education offer promise for our future workforce, it is important to recognize that the present workforce, despite its deficiencies and shortcomings, must carry Kentucky through what may prove to be pivotal years in its history. Unfortunately, high-skill, high-wage jobs are the exception in the Kentucky economy, which is dominated by smaller, often under-capitalized enterprises. Clearly, the future prosperity of working Kentuckians depends not only on the skills they bring to their workplace but the organizational strategies their workplaces bring to the international marketplace. Because of the anticipated long-term participation of the current labor force and the potentially debilitating impact its shortcomings could have on the products of future KERA generations, it is imperative that the need to train, retrain, and provide fundamental education to adult Kentuckians be met in the most efficient, most effective manner.

²² Narisetti, A1.

ANSWERING THE CHALLENGE

America stands out among advanced nations as having a unique set of approaches to education, training, school-to-work transition and overall labor market policy. Our approaches have served us well in the past. They will not serve us well in the future.

Commission on the Skills of the American Workforce, 1990

SUBSTANTIAL NATIONAL RESOURCES—more than \$300 billion in federal, state and local funds²³—are dedicated every year to the challenge of educating and training the U.S. workforce. It is a challenge that is becoming more difficult and demanding with the advance of globalization and technology, as well as the many changes these forces are fostering. Steadily, the expectations of workers and, in turn, the institutions which prepare them, are rising.

Over the coming years, much of the administrative and fiscal responsibility for meeting this rising challenge is expected to shift to the states. While state governments are already the primary administrators of education and training, the federal government controls both the purse strings and the programmatic parameters of many of the nation's job training programs. The purse strings for these programs are likely to tighten over the coming years as deficit reduction initiatives get underway. As resources for workforce development contract, responsibility for decisionmaking may expand. As a consequence of these anticipated changes, the Commonwealth will be challenged to adapt its present workforce development system to new fiscal and administrative realities and to discover the most cost-efficient and effective delivery systems.

²³ Commission on the Skills of the American Workforce, 53.

Common Purpose

WHILE THE FISCAL CHALLENGE is likely to rise, there is remarkable consensus on the direction workforce development initiatives must take. Like other reform-minded states, many of Kentucky's efforts have been shaped by the findings of a 1990 report on the future of education and training in America, prepared by the Commission on the Skills of the American Workforce for the National Center on Education and the Economy. The bipartisan Commission, which was headed by two former U.S. Secretaries of Labor, concluded that a national system was needed to train workers and organizations to become more competitive and achieve higher levels of performance. The Commission's report, *America's Choice: high skills or low wages!*, outlined four broad and far-reaching recommendations that have since been translated into reforms at both the state and national level:

- Develop a national certification system for elementary and secondary schools, a Certificate of Initial Mastery (CIM) to be awarded to those students who demonstrate mastery of specific real-world skills at various education levels.
- Develop a system of classroom work and job training to prepare individuals who receive their CIM to meet the skill standards of high-performance work organizations.
- Create programs and incentives to encourage businesses to adopt high-performance work organization strategies, including spending a portion of the firm's budget on worker training.
- Develop a national labor market system that embraces these new standards and organizational techniques.²⁴

At the national level, many aspects of these reforms are being instituted or tested. In 1995, for example, a 17-state consortium drafted standards in math, science and English language arts as part of the Certificate of Initial Mastery (CIM) system. This group, called New Standards, has also started to develop a performance assessment system to evaluate elementary, middle school and secondary students on standardized tests. In 1994, Congress passed the School-to-Work Opportunities Act which authorized funds for states and localities to launch school-to-work transition systems designed to introduce young people to work and more closely align education with workplace needs. In addition, a new National Skill Standards Board was created in 1994

²⁴ Commission on the Skills of the American Workforce, 69-90.

to develop a system of occupational skill standards which meets the needs of high-performance employers.

Legislation was also brought before Congress in 1994 to create a national labor market system. The Clinton Administration proposed the creation of “one-stop” career centers where workers could learn about available jobs, the skills and credentials needed for those jobs, and enroll in training.”²⁵ While Congress did not enact the legislation, states have begun to embrace this pilot program designed to create local labor market systems. The Administration and the new Congress also have been exploring other proposals such as job training vouchers, block grants and alternative forms of training and education entitlements as additional methods to improve the quality of the nation’s workforce.

Kentucky has translated many of these concepts into its own policy initiatives. The Kentucky Education Reform Act (KERA) is widely recognized as the most comprehensive school reform initiative in the nation. KERA’s emphasis on critical thinking skills, system accountability for student performance, and periodic assessments establishes a solid educational foundation on which the state’s future workforce can build.

The reforms of post-basic education and training, while substantial, have been more limited in scope than KERA. However, the move to streamline the state’s workforce training delivery system with creation of the Workforce Development Cabinet in 1990 is nationally recognized as an organizational model. The real benefits of this structural alignment can be expected to materialize over the long term as a series of initiatives coalesce. Among them are a comprehensive school-to-work initiative now in the development stage and one-stop career centers.

In 1994, Kentucky became one of eight states to win a federal grant to develop a comprehensive school-to-work program that will strengthen the link between the reforms of KERA and the workplace. An anticipated \$24 million over the next five years will fund joint ventures of business, labor, education, and government in labor markets throughout the state. The Kentucky Workforce Partnership Council will coordinate the program and assist local partnership councils in the state’s 22 labor markets by implementing regional strategies to prepare students for the workplace. These strategies include fostering apprenticeship programs and on-the-job training, designing school curricula, and offering other forms of technical assistance to students, schools and businesses.

²⁵ National Center on Education and the Economy (NCEE), Workforce Skills Program. (1995). *Building a System to Invest in People: States on the Cutting Edge*. Washington, DC: NCEE.

The Cabinet is also developing a statewide one-stop service delivery system to assist employed and unemployed adults and employers in accessing the state's educational, employment and training resources. Kentucky was one of only four states to receive a federal grant for both a school-to-work initiative and one-stop career center development. Nearly \$10 million will be disbursed over the next three years to establish one-stop centers in identified labor market areas.

Another reform of Kentucky's post-secondary education system that reflects unifying national purpose was the creation of the Interagency Commission on Education and Job Training Coordination. The Commission serves as an advisory body that identifies opportunities for cooperation between businesses, state agencies and educational institutions, and recommends strategies to improve collaboration and efficiency. The Commission is also charged with advancing the widely touted goal of "seamlessness," by ensuring maximum transferability of credits between state-supported institutions.²⁶ The problem of the transferability of college and technical school credits among institutions, for example, was estimated to have cost students more than \$350,000 in 1992 alone.²⁷ While much work has been done to address the problem, obstacles remain.

The future is expected to spawn dramatic change throughout Kentucky's extensive workforce development infrastructure, an overview of which follows.

Kentucky's Delivery System

*K*ENTUCKY IS HOME to an extensive public infrastructure dedicated to meeting the training and education needs of the present and future workforce. The numerous state and federal programs designed to train Kentucky's workforce include such traditional institutions as universities and community colleges, vocational and technical schools, apprenticeships, and on-the-job training, as well as newer programs, such as the school-to-work initiative and one-stop career development centers.

²⁶ Governor's Commission on Quality and Efficiency. (1993, November 1). *Workforce Training: Final Report and Recommendations*, Frankfort, KY.

²⁷ Ibid.

As illustrated in Table 1, the state's *overall effort* to train and educate Kentucky's workforce depends nearly equally upon federal and state appropriations. In 1994, approximately 87 percent of the state's general fund appropriations for post-secondary education and training went to higher education, which has experienced steady declines in the portion of its reve-

TABLE 1 Kentucky's Workforce Development Delivery System FY 1994 Appropriations (in thousands)				
System	General Fund Appropriation	Agency Funds	Federal Funds	Total
Higher Education	\$697,845	\$915,690	\$167,006	\$1,780,541
Workforce Development Cabinet:	<u>84,270</u>	<u>42,738</u>	<u>84,833</u>	<u>211,841</u>
Dept. for the Blind	1,319	4,050	7,105	12,474
Dept. for Adult Education & Literacy	6,125	2,692	8,992	17,809
Dept. for Vocational Rehabilitation	6,416	2,555	34,991	43,962
Dept. for Technical Education	55,845	30,943	29,491	116,279
Other	14,565	2,498	4,254	21,317
Employment Services	0	5,146	415,784	420,930
Job Opportunities & Basic Skills	8,122	0	14,878	23,000
Secondary Vocational Education	6,376	383	6,983	13,742
Bluegrass State Skills Corp.	3,600	0	0	3,600
TOTAL	\$800,213	\$963,957	\$689,484	\$2,453,654
<i>Source: Budget of the Commonwealth, 1994-1996</i>				

nues provided by state dollars in recent years. Moreover, higher education is far more vulnerable to changes in federal programs than Table 1 suggests. If student loan programs were to be substantially reduced, as recent congressional proposals advocated, the huge pool of "agency funds" or tuition on which higher education now depends would be at risk.

A substantial loss of federal funds earmarked for job training may have a potentially severe impact on programs administered by the Workforce Development Cabinet. Only the Cabinet's Department of Technical Education, which administers the Kentucky Tech program, depends principally upon state funds. By contrast, the Office of Training and ReEmployment, which administers the Jobs Training Partnership Act, and Employment Services, which merged with the Cabinet in 1995, rely almost exclusively on federal funds.

Congress' proposed "devolution" of power over spending priorities and program administration to the states would replace formulaic funding for specific programs with block grants, lump sum payments with general spending criteria. While state governments would have greater control over spending decisions, they would have fewer dollars to spend. According to one estimate of a U.S. Senate proposal to consolidate 91 federally funded

training programs into a single \$7 billion block grant, job training funds would be cut by 15 percent in 1998.²⁸

The programs hardest hit would obviously be those most reliant upon federal dollars. Vocational education and adult training could lose up to \$5.2 million in federal money under the House proposal. Other programs, such as those allocated under the Job Training Partnership Act (JTPA), could lose up to \$21 million next year alone. Future cuts in federal spending could seriously impede Kentucky's ability to meet education and training needs, unless policymakers cultivate new sources of funding and maximize the effectiveness of remaining funds.

In spite of efforts to increase efficiency through collaborative relationships between agencies, a range of factors continues to undermine the unity of purpose, process and product that Kentucky's workforce development system must achieve. While the expected trends of diminishing federal funds and broadening competition for state funds may only intensify institutional rivalry, they also underscore the absolute necessity of greater institutional effectiveness and efficiency. At a minimum, the system must become far more collaborative. Ultimately, however, it may be necessary to streamline and restructure it in order to maintain critical workforce development initiatives and achieve higher returns on public investment.

Higher Education. Kentucky's public universities and community college system have historically been the most significant state resource for educating the future labor force, one to which a substantial portion of state resources has been dedicated. The state's public system is augmented by 19 private two- and four-year colleges which provide post-secondary educational opportunities across the state. Institutional support for Kentucky's publicly supported institutions of higher education is provided by the Council on Higher Education (CHE) and the Kentucky Higher Education Assistance Authority (KHEAA).

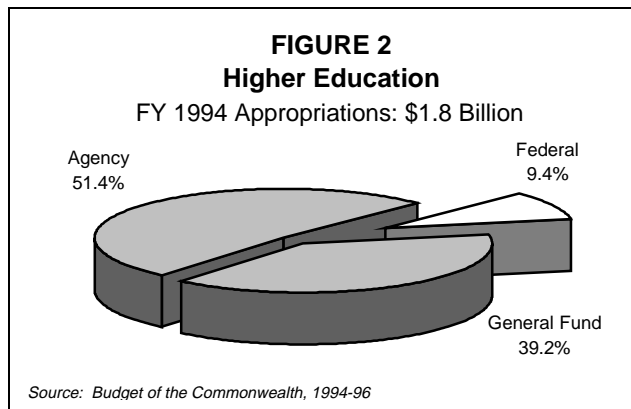
Broad recognition of the pivotal role higher education plays in workforce preparation is evidenced by the substantial increases in enrollment these institutions have enjoyed in recent years, particularly the community colleges. (A detailed summary of community college system programs appears in the appendix to this report.) While overall enrollment at state-supported institutions of higher education increased 39 percent between 1984 and 1993, enrollment at the community colleges soared by 104 percent. Importantly, many of the students at Kentucky's state-supported universities and community

²⁸ Kelly, K., Melcher, R.A., Garland, S.B., and Zellner, W. (1995, August 7). Power to the states. *Business Week*, 49.

colleges are non-traditional, that is, 25 years of age or older. As enrollment increased over the most recently reported decade, so too did non-traditional enrollment, up from 36 percent in 1984 to 41 percent in 1993. By 1993, nearly half of students at the state's community colleges were 25 years or older.

The lion's share of state funds (87 percent) dedicated to the array of post-secondary workforce training and education initiatives helps finance the state's eight universities, including the University of Kentucky Medical Center and agricultural experiment stations around the state, and 14 community colleges. Nevertheless, the state has lost significant ground in its support of higher education. What seems like a generous contribution to higher education is in fact one of the lowest in the southeast United States. Over the most recent decade, Kentucky's state-supported institutions experienced the region's largest decline in expenditure per full-time student, according to the Southern Regional Education Board. Kentucky's spending per full-time student fell 17 percent, even as enrollment grew at one of the fastest rates in the Southeast. Enrollment at Kentucky's state-supported institutions of higher education increased 31 percent over the last decade, compared to a 24 percent average for the South. Southern colleges made funding gains that averaged 23 percent over the same time period, while institutions in Kentucky enjoyed only an 8 percent increase in funds.²⁹

As illustrated, appropriations for higher education reached \$1.8 billion in 1994. While direct federal funds, excluding indirect receipts of federally backed student loans, provided less than 10 percent of funding for higher education, they nevertheless constituted nearly \$170 million of higher education revenues. While general fund appropriations provided almost 40 percent of funding for higher education, agency funds derived from tuition and other sources of revenue, including sales to the public, met 51.4 percent of appropriations.



²⁹ Muhs, A. (1995, September 7). Ky. college funding drops most in region. *Lexington Herald-Leader*, B1.

The ratio of general fund appropriations to tuition has changed substantially. Ten years ago, the state contributed \$4 for every dollar a student paid in tuition. Today, the state contributes only about \$2.50 for every dollar paid in tuition.³⁰ As a consequence of increased reliance on tuition as a source of revenue, the Commonwealth's most important workforce development resource has become more expensive, possibly less accessible to many Kentuckians, and more vulnerable to federal cuts in student loan programs.

Rising tuition rates have paralleled the decline in state support for higher education, as public institutions have replaced a substantial portion of lost state revenue with higher "user fees." While general fund contributions to the state's public universities and community colleges increased by \$240 million over the most recent decade, expenditures increased \$778 million. Tuition's contribution to revenue increased \$154 million.³¹ Over the course of the decade, the general fund contribution to higher education in Kentucky declined from 47 percent of overall university and community college budgets in 1983-84 to 39 percent in 1993-94, a trend mirrored in states around the nation, as education dollars are crowded out by spending in such areas as corrections, health care and human services.

Emerging trends in other states suggest that higher education's share of public resources may continue to decline. In California, considered a bell-

Emerging trends in other states suggest that higher education's share of public resources may continue to decline.

In 1995, California state spending for corrections actually consumed more of the state budget (9.9 percent) than spending for higher education (9.5 percent).

wether state by many, spending for corrections has risen dramatically and is expected to continue rising with implementation of "three-strikes - you're - out" legislation. Spending for corrections

threatens to crowd higher education completely out of the California state budget in coming years, a 1994 RAND Corporation study predicts.³² In 1995, California state spending for corrections actually consumed more of the state budget (9.9 percent) than spending for higher education (9.5 percent).³³

³⁰ Schirmer, P., Childress, M.T. and Nett, C. (1996). *\$5.8 Billion and Change*. Frankfort, KY: Kentucky Long-Term Policy Research Center, 12.

³¹ Kentucky Council on Higher Education. (1995, July). *Kentucky Higher Education, 1985-1994 Information Digest*, Frankfort, KY.

³² Carroll, S.J., McCarthy, K.F., and Wage, M. (1994, Fall). California's looming budget crisis. *RAND Research Review*, RAND Corporation, Santa Monica, CA, 2-4.

³³ Butterfield, F. (1995, April 12). New prisons cast shadow over higher education. *The New York Times*, A12.

Importantly, federal dollars also met an expanding share of higher education revenues in Kentucky, up from 9 percent of revenue in 1983-84, to 11 percent in 1992-93. Overall, federal funds to higher education in Kentucky rose \$105,645 million or 59 percent.³⁴ Cuts in federal funds could not only have an adverse effect on revenue streams to Kentucky's university system but also on students, who would likely assume part or possibly all of the added cost burden in the form of higher tuition and fees. And, were federal student loan programs to be cut, as recent congressional budget-cutting initiatives have sought to do, the fiscal impact on state universities could be dramatic.

Some, however, argue that federal student loan programs have removed incentives for cost reduction and, in effect, enabled higher education institutions to avoid painful restructuring and reorganization.³⁵ Instead, institutions have shifted costs to students who have ready access to federally backed loans that continue to meet uncontained, rising costs. As a consequence, federal outlays and debt burdens are mounting to record heights. Total U.S. borrowing nearly doubled over the most recent decade.³⁶

Cabinet for Workforce Development. As part of the education reforms instituted in 1990, the General Assembly created the Cabinet for Workforce Development to bring an array of adult education and training agencies under one umbrella. Not surprisingly, streamlining the organizational structure has been a primary objective of the Cabinet since its inception, prompting periodic reorganization and incorporation of other agencies and departments identified with adult education and training. The consolidation of programs, however, remains incomplete and the fiscal future of the Cabinet's core programs uncertain.

Today, the Workforce Development Cabinet provides training and complementary services through its Departments for Adult Education and Literacy, the Blind, Vocational Rehabilitation, Technical Education, and Employment Services, as well as the Office of Training and ReEmployment, which administers the federal JTPA. In 1994, these departments and offices served more than 200,000 Kentuckians. The Cabinet's most recent addition, the Department for Employment Services, provides job placement, conducts labor market analyses, and administers the state's unemployment insurance program. Employment Services, which relies almost exclusively (99 percent) on federal funds, brought a budget to the Cabinet that exceeded past appro-

³⁴ Ibid.

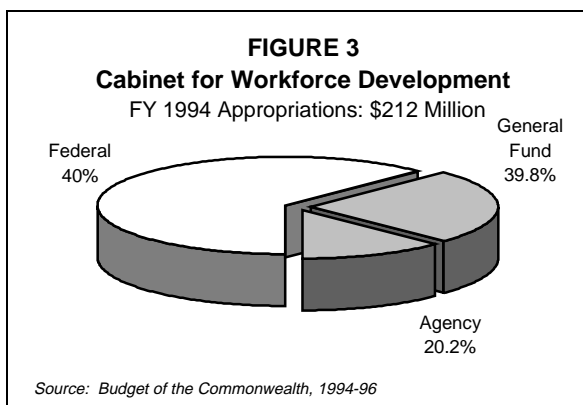
³⁵ Fiske, E.B. (1995, December 12). Aftermath of easy college loans are crushing debt, higher tuition. *Lexington Herald-Leader*, A11.

³⁶ Ibid., A11.

priations for all other programs combined. (A detailed summary of the programs administered by the Cabinet appears in the appendix to this report.)

Many of the programs administered by the Workforce Development Cabinet focus on reaching people who are outside formal systems, the disabled and the undereducated, for example. The efforts of Adult Education and Literacy, which are critical to reducing the ranks of Kentuckians who lack basic skills and basic credentials, are, however, frustrated by declining enrollment and poor retention. Department officials cite the ready availability of low-wage, low-skill jobs in the state as an obstacle to participation. Many would-be participants are forgoing the long-term benefits of training and education for the short-term rewards of low-skill jobs. Nevertheless, participation in the industry-oriented programs of Kentucky Tech has climbed slowly, inching upward by 2 percent for the 1995-96 year.

As with higher education in general and the community colleges in particular, significant pressure exists to increase funding for programs administered by the Workforce Development Cabinet. Unlike higher education, however, the offices and departments administered by the Cabinet rely heavily on federal funds. While federal dollars for higher education, \$180 million in 1993-94, exceed those dedicated to Workforce Development Cabinet programs (\$133 million), the portion of Cabinet funds which derive from federal sources is far greater.



As illustrated, nearly \$211.8 million was appropriated to the Cabinet in Fiscal Year 1994, 40 percent of which was federal. Importantly, these figures do not include the Department for Employment Services, which was located in the Cabinet for Human Resources until mid-1995. If appropriations to Employment Services were included, the share of

appropriations to the Workforce Development Cabinet provided by federal funds would increase to almost 80 percent.

As a consequence of anticipated federal cuts, the future of many Workforce Development Cabinet initiatives may be in jeopardy. Because many of these programs address fundamental inadequacies in Kentucky's educational makeup, the impact of funding losses could be severe.

Other Training Initiatives. As previously noted, some training initiatives remain outside the purview of the Workforce Development Cabinet, diluting the focus of job training efforts and making it difficult, if not impossible, to achieve and sustain a long-term vision for the workforce of the Commonwealth. Nevertheless, some, namely the Bluegrass State Skills Corporation, offer a worthy model for public-private collaboration that should be broadly emulated.

Bluegrass State Skills Corporation. Formed in 1984, the Bluegrass State Skills Corporation (BSSC) is an independent, quasi-public corporation charged with establishing and operating customized, industry-specific training programs. Located within the Economic Development Cabinet, BSSC oversees the distribution of state funds and credits for job creation and preservation through training. Its role is closely linked to industrial incentives aimed at job creation and retention, hence its present location in the Economic Development Cabinet. Over the course of Fiscal Years 1991-1994, BSSC served an average of 23,500 workers and 190 firms a year.

The BSSC is governed by an 18-member board of directors, including representatives from business, government, education and labor.³⁷ Its primary mission is to administer funding for the state's industry-specific training program.³⁸ The BSSC *does not provide* training or facilities. Rather, it facilitates the use of capital, equipment and resources for training by providing grants to private businesses which customize specific training programs with the assistance of local educators. Companies and educational institutions must submit a grant application that outlines a joint plan for training and instruction and assures the company will provide at least a dollar-for-dollar or in-kind match for the amount of the BSSC grant.³⁹ The BSSC Board of Directors must approve all applications. The appendix of this report provides greater detail on the process of securing training through BSSC and the types of training provided by BSSC.

BSSC relies solely on general fund appropriations, but because the BSSC has been given special authorization by the General Assembly to carry forward cash balances, it is difficult to accurately assess spending. The current carry-over from one fiscal year to the next makes the relationship between expenditures and appropriations unclear. For example, in FY 1994 the BSSC was appropriated almost \$4.2 million from the general fund,⁴⁰ yet total FY

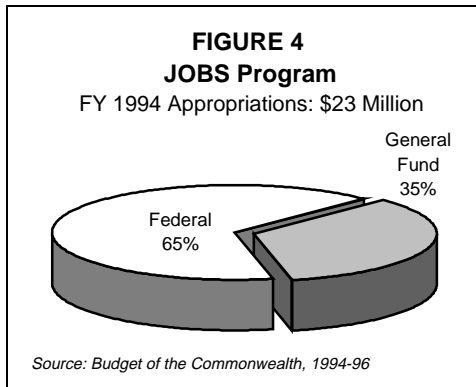
³⁷ Bluegrass State Skills Corporation (BSSC). (1993). Annual Report, FY 1992-1993, Frankfort, KY.

³⁸ For example, the Economic Development Cabinet and BSSC shared the administrative and fiscal responsibilities of retraining workers at the General Tire facility in Mayfield during FY 1990 through FY 1993.

³⁹ BSSC (1993).

⁴⁰ Commonwealth of Kentucky. (1994). *1994-1996 Budget of the Commonwealth*.

1994 expenditures were less than \$2.3 million.⁴¹ In contrast, state appropriations for the BSSC have been remarkably close to the four-year average annual expenditure. In the past four years, the state has appropriated approximately \$3.6 million annually to the BSSC, while the average annual expenditure for BSSC-approved training programs was more than \$3.5 million per year from FY 1991 to FY 1994.⁴²



Job Opportunities and Basic Skills. The Job Opportunities and Basic Skills (JOBS) Program in the Cabinet for Families and Children is federally mandated to provide education, training, and employment opportunities for recipients of Aid to Families with Dependent Children (AFDC). While some recipients are exempt, most are encouraged and some are required to participate in the JOBS Program, which operates in 92

counties across the state.⁴³

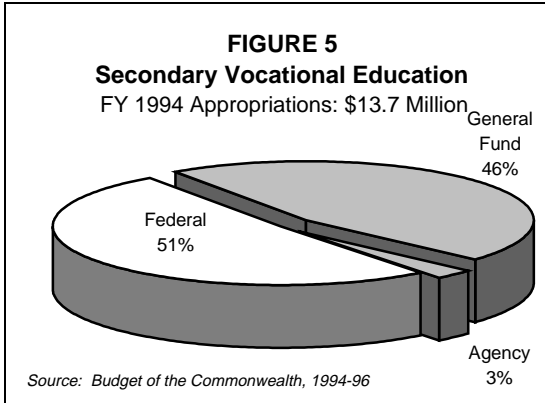
JOBS offers a variety of services, including assistance in acquiring adult basic education skills, General Education Development Certificates (GED), or access to other educational facilities or programs. JOBS also provides some basic assistance with job searches, child care and transportation assistance. In FY 1994, the JOBS program received more than \$23 million in appropriations. Of that, approximately 65 percent was federal money.

⁴¹ BSSC. (1994). Annual Report, FY 1993-1994, Frankfort, KY.

⁴² BSSC. (1995, July 11). Projects Summary, Frankfort, KY.

⁴³ Kentucky Cabinet for Human Resources, Department for Social Insurance. (1994). Job Opportunity and Basic Skills (JOBS) Fact Sheet, Frankfort, KY.

Education, Arts and Humanities Cabinet and the Justice Cabinet. With expenditures just over \$2.4 billion in FY 1994, the Department of Education accounts for almost 100 percent of the total budget of the Education, Arts, and Humanities Cabinet.⁴⁴ The



Department of Education operates and administers vocational education and training programs through the Division of Secondary Vocational Education. Located in the major program area of Learning Support Services, the Division of Secondary Vocational Education provides technical assistance, consultative services and staff development to vocational education

programs in local school districts and area vocational education centers. The Division of Secondary Vocational Education served more than 134,000 students under a budget of \$13.7 million for FY 1994. Of that total, more than half (almost \$7 million) came from federal funds.

Under the supervision of the Justice Cabinet, the Department of Corrections administers an educational program in each of its adult correctional institutions. This program's general fund expenditures totaled more than \$3.2 million in FY 1994. The majority of the expenditures were for education programs at adult corrections institutions. More than 3,000 inmates at Kentucky correctional facilities received some kind of adult education. The Department of Corrections educational program did not receive any federal money.

Conclusion

*K*ENTUCKY STATE GOVERNMENT has marshaled an impressive array of programmatic responses to workforce development needs. KERA has begun to systematically address the critical-thinking skills that future workforce en-

⁴⁴ Commonwealth of Kentucky.

trants will need; the state's emerging school-to-work initiative will help strengthen ties between workplaces and critical preparation; and one-stop career development centers will streamline program delivery and give individuals unprecedented access to options and opportunities. Most of the workforce preparedness agencies and responsibilities have been consolidated under a single cabinet, and the business community of Kentucky is becoming more involved in decisionmaking about vocational education curricula and training investments.

Things look right on paper, yet we continue to face formidable gaps in workforce readiness and institutional responsiveness. Many of our firms are low-skill industries that have not adapted to the global context, and Kentucky's working age population is among the most undereducated in the nation. In spite of our concerted efforts, the goal of "seamlessness," a cohesive, accessible system of education and training, remains unrealized. Redundant programs, institutional rivalry, poor response to customers, poor alignment of training with job markets, inaccessibility, and a host of other problems continue to inhibit the effectiveness of education and training efforts that are critical to Kentucky's long-term social and economic well-being.

The lingering gap between vision and outcomes underscores the importance of discovering an appropriate collaborative balance between the public and private sectors *and* maximizing returns on public investment. As we confront the immediate possibility of reductions in already inadequate public resources for workforce development, these objectives take on a new urgency. In the following chapters, we discuss ways the Commonwealth can begin to answer the workforce development challenge and better prepare workers and workplaces for the 21st Century.

BALANCING PUBLIC AND PRIVATE ROLES

*Workforce development issues involve an intertwining of the private and public sectors, where ground rules are new, and the respective responsibilities of each sector have not been well defined.*⁴⁵

William Huston
Secretary,
Workforce Development Cabinet
1991-1995

THE RELATIONSHIP between socioeconomic progress and the health of those enterprises which fuel commerce and investment is perhaps too obvious to state. They are inextricably linked. Both public and private efforts to train and educate the workforce yield broad-based benefits, enabling higher levels of efficiency, productivity and prosperity. Nevertheless, public and private roles are often blurred and uncertain, and the absence of an institutionalized bridge between workforce preparation and the real world of work continues to inhibit the effectiveness of both sectors.

While we have an extensive state and national infrastructure for workforce education and training, it remains poorly linked to the world of work—where expectations are steadily rising. Research, for example, shows that employers routinely disregard academic performance when selecting new employees. In a national survey of firms conducted by the U.S. Bureau of the Census for the University of Pennsylvania's National Center on the Educational Quality of the Workforce (EQW), academic performance ranked ninth overall, near the bottom of a list headed by attitude, communication skills and previous work experience.⁴⁶ At the same time, significant percentages of high school graduates are often rejected for entry-level positions. Most are prepared only for low-skill jobs that now are almost exclusively low-wage jobs. Among all workers, employers estimate that one in five is not fully proficient at his or

⁴⁵ National Center on Education and the Economy, 19.

⁴⁶ Zemsky and Iannozzi, 6-7.

her job,⁴⁷ a situation that reflects rising skill demands as well as poor preparation for work.

Among the most difficult challenges policymakers confront is striking the appropriate balance between public roles, those which contribute to the *public* good and advance long-term goals, and private roles, those which contribute to the profitability of enterprises. Clearly, significant interdependence exists between the two roles, as each sector benefits from the other's contribution, but the public good is not always served by private gain and *vice versa*. And, while both the public and private sectors exhibit strengths in their assumed roles, neither is as effective as it must become in order to meet the formidable challenges of globalization and technological advancement. Employers make minimal commitments to frontline workers and to the development of basic skills, a need that public resources cannot fully meet. Consequently, policymakers must discover ways of realizing the highest possible return to citizens from public investment *and* leveraging greater private involvement and commitment.

The necessity of improving coordination of the design and delivery of public and private workforce development strategies is underscored by the specter of further limitations on already strained public resources *and* expanding public and private demand. Moreover, the capacity of the public sector to meet this demand for services will almost certainly be diminished in the coming years. Had the public-private link been historically strong, the vast public resources now committed to workforce development would, in all likelihood, be geared less toward closing gaps and more toward the optimum lifelong learning model to which we aspire.

Defining Differences

THE DIFFERENCE between public and private roles in workforce development is essentially one of goals. Ideally, government investment in workforce development serves the common good and yields broad public benefits. While private sector investments in training and education often provide significant public returns, they are generally focused on increasing returns to a far more narrow sphere of beneficiaries, namely shareholders. And, as recent history has shown, dividends to shareholders do not always

⁴⁷ Zemsky and Iannozzi, 4.

correlate with broad public benefit. In spite of a 45-year high for corporate profits in mid-1995, wage and income growth remained sluggish and employers continued “to drive down costs as if the economy still were in a tail-spin.”⁴⁸ During 1995, wages and benefits made the smallest gain ever recorded.⁴⁹

Given the nature of the U.S. business climate, the private sector is also under significant pressure to secure faster, more visible returns on investments that training and education often do not yield. Knowledgeable observers argue that this “quarterly returns” mentality, which provides the impetus for many business strategies, is constraining the ability of American enterprises to maximize their potential through strategic long-range planning and investment. Indeed, the most formidable of U.S. competitors, Japan and Germany, routinely look long term and invest accordingly. Fortunately, some of the nation’s and the state’s most prominent firms have become notable exceptions to the short-term business mindset by investing broadly in the development of a culture of workplace learning. Unfortunately, they are among the minority of firms, according to most assessments.

By contrast, the public sector usually makes long-term investments for which the returns are frequently difficult to measure. While political expediency influences public investment, it has not unduly compromised the broad and long-standing public role of providing equal opportunity to an educational foundation on which individuals can build as they see fit. However, the historic weakness of this foundation and the widening gap between private expectations and public provisions is propelling broad-based reform. Today, those already on the job, as well as new labor force entrants, confront a job market in which expectations of workers have risen to unprecedented levels. As a result, the high school education that once served a broad public is rapidly becoming inadequate, raising disturbing questions about the publicly supported foundation now in place.

Importantly, public workforce development efforts also embrace people who are outside formal systems—the unemployed, underemployed and undereducated; welfare recipients; disabled individuals; and those who are not tied to formal employers. State government provides workforce and life skills training to the physically and mentally challenged, and, with federal support, administers job training and placement for heads of households who receive public assistance. In many instances these individuals, as well as many others, would be excluded from training and work opportunities were it not for publicly financed efforts.

⁴⁸ Bernstein, A. (1995, July 17). The wage squeeze. *Business Week*, 55.

⁴⁹ Associated Press. (1996, February 14). Wage and benefit rise is smallest on record. *The Courier Journal*, A1.

An Expanding Commitment

WHILE THE BASIC SKILLS provided by public education are applicable to many, if not all, businesses, the skill requirements of individual enterprises

TABLE 2 Training Vendors for US Firms, 1994	
Sources of Training	Percent of Establishments
Equipment Suppliers/Buyers	50%
Private Consultants	36%
Private Industry Councils or Other Industry Associations	34%
Technical & Vocational Institutions	33%
Community & Junior Colleges	30%
4-Year Colleges or Universities	20%
Government-Funded Training Programs	12%
Unions	5%
<small>Source: National Center on the Educational Quality of the Workforce, University of Pennsylvania, 1995</small>	

are organizationally unique and, thus, so vast in number that they are clearly beyond the public sector's reach. Yet state governments have taken a leading role in workforce development, largely because of the comparatively limited role U.S. businesses have assumed in promoting broad-based training. Nevertheless, recent survey results indicate that

employers do not turn to schools as primary providers of training,⁵⁰ again underscoring the weakness of public-private links.

According to a 1995 survey of establishments conducted by the University of Pennsylvania's National Center on the Educational Quality of the Workforce, the principal sources of training cited by establishments were equipment suppliers, who routinely train employees on the use of their products; private consultants, who have played a substantial role in guiding organizational change; and industry associations. As illustrated, these training vendors are followed by publicly funded vocational-technical schools and community colleges. Universities and job training programs, employers report, play a diminished role in providing training.⁵¹

Regardless of the training providers that employers rely upon, U.S. workers receive far less training than many of their international counterparts. In contrast to European firms, American firms allocate a relatively small amount of money to worker training. Nevertheless, a 1994 study by the U.S. Bureau of the Census found that employers were the most common source of financial aid to 1990-1991 post-secondary students, but the assistance pro-

⁵⁰ Zemsky and Iannozzi, 5- 6.

⁵¹ Ibid., 5-6.

vided represented the lowest average amount of aid.⁵² Overall, most U.S. firms spend less than 2 percent of their payroll on formal or classroom training while leading European firms routinely spend up to 6 percent of their budget.⁵³ European and Japanese firms, however, have a much more extensive school-to-work educational system that encompasses all levels of the learning process, and business plays an integral role in planning and development at many stages of the process.⁵⁴

U.S. businesses, however, play a critical role in the education and training of individuals *on the job*. According to the American Society for Training and Development, U.S. businesses spend approximately \$30 billion a year on formal worker training and education compared to an estimated \$180 billion on informal or on-the-job training. Importantly, the earnings returns on employer-based learning is estimated to be at least three times the returns from formal schooling,⁵⁵ which are substantial. In addition, productivity returns from on-the-job learning are estimated to be double the impact of increased levels of education, and have almost three times the effect of introducing new technologies.⁵⁶

The ability of firms to make costly investments in formal or informal training and development is tied directly to their size and relative wealth. In 1990, the Commission on the Skills of the American Workforce reported that only 0.5 percent of all American employers had spent \$27 billion of the \$30 billion invested nationally in workforce training and education. “Of this small universe of firms that actually train, only 100 to 200—the largest companies with significant professional and managerial staff—spend more than 2 percent of their payroll on formal training.”⁵⁷ Importantly, the Commission also concluded that only one-third of these training dollars were directed toward frontline, non-college educated workers.⁵⁸

More recently, a national survey conducted by the Social and Economic Sciences Research Center at Washington State University with assistance from the University of Kentucky found that those individuals who are most often encouraged by their employers to acquire more knowledge are already college educated. People with bachelor’s degrees most often reported having been encouraged by an employer at some time during the past three years to

⁵² Sutterlin, R. and Kominski, R.A. (1994). *Dollars for Scholars: Post-secondary Costs and Financing, 1990-1991*. Washington, DC: U.S. Department of Commerce, 6-7.

⁵³ Commission on the Skills of the American Workforce, 64.

⁵⁴ Liddell, S.A. (1994). *Racing With The World: How States Can Build a 21st Century Workforce*. Denver: National Conference of State Legislatures.

⁵⁵ Carnevale, A.P. and Johnston, J.W. (1989). *Training America: Strategies for the Nation*. Alexandria, VA: National Center on Education and the Economy; American Society for Training and Development.

⁵⁶ Ibid.

⁵⁷ Commission on the Skills of the American Workforce, 49.

⁵⁸ Ibid., 49.

seek more education and training; more than half of respondents with bachelor's degrees (53 percent) reported such employer encouragement compared to only 33 percent of respondents with a high school diploma or its equivalent.⁵⁹ Not surprisingly, the survey authors note, those individuals who reported being encouraged by their employers to seek more training and education also reported the highest incomes.⁶⁰

While offering little information about who receives training, more recent survey results suggest that the *incidence* of training among employers is relatively high but still considerably lower among smaller employers. According

TABLE 3 Incidence of Training Among US Firms, 1994		
Establishment Size (Number of Employees)	Formal Training	Informal Training
All Establishments	81%	97%
20-49	75%	96%
50-99	82%	99%
100-249	90%	98%
250-1000	90%	99%
More than 1,000	99%	98%
<small>Source: National Center on the Educational Quality of the Workforce, University of Pennsylvania</small>		

to a 1995 report on national survey results from the National Center on the Educational Quality of the Workforce, while 97 percent of all establishments, regardless of size, provide informal training, 81 percent provide formal training. Among employers with 20 to 49 employees, the incidence of formal

classroom training drops to 75 percent, which, nevertheless, represents a substantial commitment to more costly informal training.⁶¹

Importantly, these survey results indicate that employer commitment to formal training is expanding and that organizational change has precipitated an increasing share of it. More than half (57 percent) of responding establishments reported having increased formal training over the past three years.⁶² While almost no resources were dedicated to remedial skills in literacy or arithmetic, employers are investing substantial resources in “attitudinal and behavioral skills.”⁶³ While training in the safe use of equipment and tools garners the most time and investment, “improving teamwork or problem-solving skills,” “training in sales and customer service,” and “training to

⁵⁹ Dillman, D.A., Christenson, J.A., Salant, P., and Warner, P.D. (1995, September). *What the public wants from higher education: workforce implications from a 1995 national survey*. Pullman, WA: Social & Economic Sciences Research Center, Washington State University, 14.

⁶⁰ Ibid., 25.

⁶¹ Zemsky and Iannozzi, 4-5.

⁶² Ibid.

⁶³ Ibid.

use computers and other new equipment” receive nearly equal levels of investment.⁶⁴ All are directly linked to organizational change.

As previously discussed, these same survey results found that employers in general realize a higher productivity payoff from one year of education than from equivalent increases in work hours or capital stock, resulting in what researchers label a “double payoff,” a return to employers that is equal to or greater than the wage benefit employees realize.⁶⁵ Given these responses, it is paradoxical that employers virtually disregard performance in school as a criteria for hiring.⁶⁶

IN SPITE OF THE CLEAR AND PROVEN PAYOFF that both education and training yield, many employers invest only minimally in them. While employers are the most common source of aid to post-secondary students, the financial assistance they provide is, on average, the lowest students receive.⁶⁷ For many employers, training and education are viewed as a luxury; for others, they are a risky investment with an uncertain payoff. Training does not always increase productivity, and concern about “pirating” of trained workers by other firms continues to have a chilling effect on investments in human capital development.

Unlike their counterparts in countries such as Japan or Germany, U.S. workers often feel little or no obligation to stay with a firm in return for that firm’s investment in their skill development. Instead, today’s increasingly mobile workers often view the skills they acquire as portable tools that enable upward mobility from firm to firm. Further, the ongoing erosion of the employer-employee relationship due to stagnant wages, downsizing, and an increased reliance on contingent employees, is not likely to increase employee loyalty or longevity.

Ultimately, training and education combined with progressive human resource practices, such as employee stock options or profit sharing, not only increase productivity and competitiveness, they strengthen employee commitment. Moreover, as firms cooperate more extensively and continue to form networks for a range of purposes, more uniform human resource practices and shared commitments to training are likely to emerge. EQW survey findings, for example, show that firms most often look to suppliers and customers and to industry associations as training vendors.⁶⁸

⁶⁴ Ibid.

⁶⁵ National Center on the Educational Quality of the Workforce, 2.

⁶⁶ Ibid., 3.

⁶⁷ Sutterlin and Kominski, 6-7.

⁶⁸ Zemsky and Iannozzi, 6.

But pirating is only a part of the problem. Training failures, investments in skills upgrades or training that do not achieve the desired results, also discourage many employers from committing further resources to training and education. For example, the extraordinary investment presently being made in organizational change, which is often spearheaded by private consultants, is likely to yield results only over the long term and only if a genuine commitment to cultural change occurs. As a consequence, some training failures

Frontline workers, those who arguably could have the greatest impact on productivity and product quality are being routinely excluded from opportunities for betterment, a critical ingredient in high-performance organization.

may be a product of recalcitrant managers who are unable or unwilling to provide frontline employees with opportunities to use new skills. In such cases, training could yield little or no benefits.

While training failures are also a problem for the public sector, private firms have the option of shifting the burden of training to others, usually the government, or to the individual worker. Businesses can also avoid investing in workers by introducing new technologies, hiring workers who have the requisite training, or subcontracting for services.

Perhaps the strongest inhibition to training, however, is its enormous cost, especially for smaller firms. Again, the largest and presumably the wealthiest U.S. firms account for about 90 percent of the \$30 billion spent on formal training.⁶⁹ And because college-educated workers receive the vast majority of training,⁷⁰ the skills of frontline workers are often ignored by workplace training initiatives, just as they were in many public schools. In turn, those who arguably could have the greatest impact on productivity and product quality are being routinely excluded from opportunities for betterment, a critical ingredient in high-performance organization.

Because high-performance organization is fast becoming a requisite for survival in the global economy, businesses face the cost and the challenge of erasing historic institutional neglect of frontline workers. High-performance work organizations rely on initiative, leadership, teamwork, and process inputs from empowered workers at every level, particularly those closest to actual production. The cost of bringing the workforce up to speed with the demands of the global economy is potentially staggering, given the cultural

⁶⁹ Carnevale, A. P., Gainer, L.J., and Villet, J. (1990). *Training in America: The Organization and Strategic Role of Training*, San Francisco: Jossey-Bass, Inc.

⁷⁰ Ibid.

gulf which must be closed. According to the Office of Technology Assessment, 20 to 30 percent of the workforce in some firms require skill upgrades at a cost of billions of dollars before they can even be introduced to a new process or technology.⁷¹

When a state's labor market has a relatively small supply of highly skilled workers, as it does in Kentucky, remediation can be quite costly to employers. Given this economic burden, it has been suggested that some employers may choose to forego remediation in favor of job skill reduction or relocation. While there is little national evidence of "deskilling,"⁷² national survey results suggest little inclination on the part of employers to elevate the skill levels of the least educated members of the labor force.⁷³

Public-Private Links in Kentucky

WHILE *UNCERTAINTY* about public and private roles persists and the link between the two has yet to be fully forged, Kentucky is making important inroads on both fronts. The school-to-work initiative and one-stop career centers will have a significant impact on balancing and aligning public and private roles in the coming years. Other programs built on the cooperative public-private model are already well established. Both the Department of Technical Education and the community college system offer customized training programs to business and industry and rely upon private sector representatives to help develop appropriate, timely curricula. The Bluegrass State Skills Corporation (BSSC) combines the resources of state government and Kentucky businesses to provide workers with skill-specific training. The composition of Kentucky industry, however, complicates service delivery for BSSC.

Like most states, Kentucky's industrial base is primarily comprised of small businesses. Approximately 42,000 firms, more than half of those in the state, employ from one to four workers.⁷⁴ For many of these companies, training and retraining workers is not an economically viable option. The

⁷¹ Office of Technology Assessment. (1990, September). *Worker Training: Competing in the New International Economy*. Washington, DC: Government Printing Office.

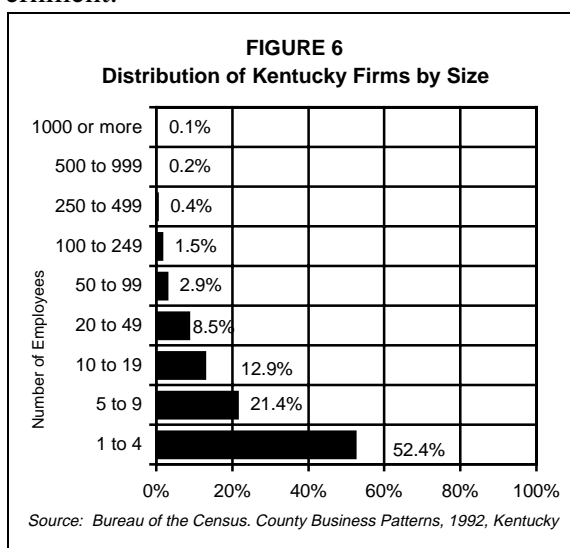
⁷² National Center on the Educational Quality of the Workforce.

⁷³ Dillman et al.

⁷⁴ U.S. Department of Commerce. (1994). *County Business Patterns, 1992*. Washington, DC: Government Printing Office.

capital and resources necessary to train workers simply may not be available. The high short-term cost of upgrading skills for only a handful of employees discourages many firms from investing in their workers.

Large firms are better able to absorb these short-term costs through economies of scale—the training costs per person go down as the number of trainees goes up. Small firms may spend the same amount of money on equipment and trainers as large firms, but the unit cost of training per worker is much higher. For small firms to be able to train as efficiently as larger firms, incentives or assistance frequently must be provided, usually by government.



Providing the stimulus for firms, particularly smaller businesses, to organize and implement worker training programs is a natural role for state government. Traditionally, state agencies have assisted firms of all sizes through two basic strategies. The first is to provide capacity. The Department of Technical Education and the community colleges employ this approach in their customized training programs by utilizing existing state facilities

and resources to enhance the capacity or training capabilities of businesses. Since the state already has the facilities and/or the equipment, the company that requests the training needs only to cover the cost of administering the program.

The second basic strategy employed by state government is to provide capital to firms for the purpose of worker education and training. The Bluegrass State Skills Corporation uses this approach, awarding training grants to businesses. In this case, state government is not necessarily involved in the development and delivery of training programs; rather, it provides the stimulus companies need to undertake in-house training programs they might not otherwise initiate.

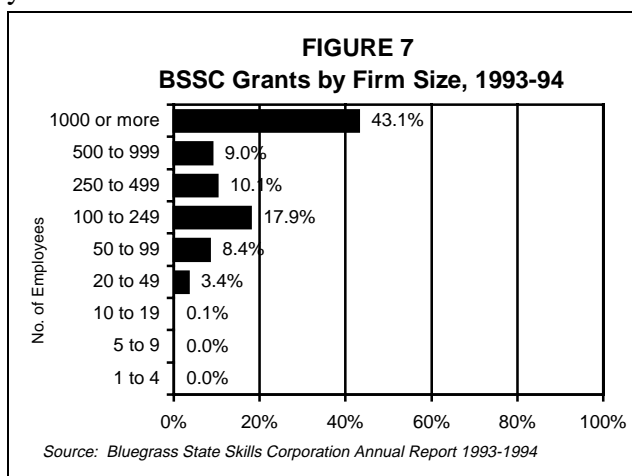
The BSSC grant training program is operated on a competitive basis with firms submitting applications for grant money. In order to receive a grant, firms must provide a matching grant for the training program. In 1994, for example, BSSC awarded a grant of more than \$56,000 to Louisville's Henry

Vogt Machine Company, which employs almost 1,400 workers. This elicited a \$215,000 industry match from the company. Overall, the more than \$2 million disbursement of grants by BSSC in 1994 was matched by almost \$15 million in funds obligated to workforce training by participating firms.⁷⁵

While state government needs to assist firms with fewer resources and less training expertise if Kentucky is going to make the transition to a high skills workforce, smaller firms, arguably those most in need of state assistance, have been less likely to receive state assistance from the BSSC. Although 98 percent of Kentucky's firms employ fewer than 100 workers,⁷⁶ these firms received less than 12 percent of the grants awarded by BSSC in program year 1994. Moreover, a significant number of grants (43 percent) were awarded to firms which employ more than 1,000 people, though only 60 such firms are located in the state.⁷⁷ Of the 42,000 firms that employ one to four workers, none received a BSSC grant in FY 1994.

Clearly, the disbursement of BSSC grants has favored larger firms over the last several years. Many of these corporations, including General Motors, Fisher-Price, Square D, and General Electric, are able to train workers more affordably than smaller firms. According to Ken Carroll, BSSC's Executive Director, BSSC has undertaken a number of steps in the past few years to help remedy disproportionate commitments to large firms. While the criteria for grant awards favors small firms, BSSC has had difficulty getting smaller firms to apply because they are frequently unsure of their training needs and ways the state can assist them. Consequently, BSSC has assumed responsibility for cultivating networks of firms in order to achieve economy of scale and serve more small employers. Since July 1995, funding to networks of industries has been given the highest priority.

The Department of Technical Education and the community college system help close the gaps in training for small firms through customized train-



⁷⁵ BSSC, 1993.

⁷⁶ U.S. Department of Commerce.

⁷⁷ BSSC, 1993.

ing and special services. Of the more than 580 firms served by Technical Education in 1994, for example, more than 350 (61 percent) employed 100 or fewer workers. The proportional representation of companies served is possible because all workers are trained at cost. The community college system's Business and Industry Technical Assistance Centers (BITAC) at Hazard, Elizabethtown and Madisonville also offer cost-free consulting services to young firms and micro-enterprises, which are expected to play an increasingly prominent role in our future economy.

Striking the Appropriate Balance

IF WE ARE TO ACHIEVE maximum returns on public investment, the appropriate balance between public and private roles in workforce development must be struck and strong public-private partnerships must be forged. Obviously, state government has a prominent, integral role to play in preparing citizens of the Commonwealth for the demands of today's workplace. The effectiveness of that role, however, will continue to be diminished as long as its training and education systems remain independent from the business community which relies upon them. In Kentucky, as well as around the nation, the public role will also be constrained by limited resources throughout the foreseeable future. Without a substantial infusion of funding, the education and training needs of Kentuckians are simply beyond the reach of the public system.

Consequently, it is critically important to maximize the impact of public efforts through a balanced, thoughtful, long-term approach to addressing the Commonwealth's training needs. Integral to each element is a broadly expanded private role in the decisionmaking process, designed to leverage higher levels of engagement and commitment to training and education and to the critical links which must be forged between education and training and the workplace.

First the Foundation

BECAUSE KENTUCKY POSSESSES limited resources with which to meet public need, a *triage* approach to workforce development, one that systematically addresses the most critical need first, offers the most logical strategy for utilizing scarce public resources. Clearly, the gap which most inhibits the ability of workers and firms to compete and prosper is a *basic skills deficit*. Moreover, it is precisely this deficit that the private sector has been least likely to address through investments in what are essentially portable skills.

While illiteracy, for example, is widely recognized as a workplace problem, only 38 percent of Fortune 1000 CEOs view it as a problem for their own workers.⁷⁸ In spite of employer reluctance to invest broadly in the cultivation of “core competencies”⁷⁹ or the basic skills of workers, they figure prominently in the competitiveness of firms. Illiteracy alone costs American businesses an estimated \$225 billion a year in lost productivity.⁸⁰ Basic skills deficits compound those losses.

Because the private sector is reluctant to invest in the educational foundations of workers and because they are so critical to our economic future, the primary focus of the state’s workforce development strategy, one that embraces our entire institutional framework, from adult education and literacy initiatives to community colleges and state-supported universities, should be closing the state’s basic skills gap. Such a focus does not argue for the exclusion of other commitments but rather the establishment of a central mission, one in which business and industry must be enlisted.

A level of commitment comparable to that which Cora Wilson Stewart brought to her early crusade against illiteracy in Rowan County, Kentucky, must be brought to eliminating Kentucky’s basic skills deficit. Stewart established “moonlight schools” in communities where working people needed them, taught hundreds of people to read after working hours, and set an example for the nation.⁸¹ With like dedication to the enabling citizens and firms to prosper, Kentucky can change the face of its future. It can eliminate the damaging labels of “uneducated” and “illiterate” under which the people

⁷⁸ Reese, 14.

⁷⁹ Advisory Board of the National Center on the Educational Quality of the Workforce. (1995). On connecting school and work. *EQW Policy Statement*, University of Pennsylvania, 3.

⁸⁰ Reese, 14.

⁸¹ Kleber, J.E, Clark, T., Harrison, L.H., and Klotter, J.C., editors. (1992). *The Kentucky Encyclopedia*. Lexington, KY: University of Kentucky Press, 646.

of this state have labored for far too long and prepare citizens of the Commonwealth to meet the challenge of the future. To do so, unprecedented institutional energy must be poured into the work of developing creative outreach programs, delivery systems, incentives, and rewards for and recognition of individual and institutional achievements.

Arguably, two public roles make the most important and enduring contributions to the capacity of Kentucky's workforce to compete and prosper. Primary and secondary education and adult basic education meet the most critical public need, that of providing a quality educational foundation on which individuals—young and old—can build. From kindergarten to literacy services, providing essential basic skills is the first and foremost *public* responsibility. Without these skills, Kentuckians cannot participate in a learning culture and achieve higher skills, and they cannot prosper in a volatile job market in which millions of once-permanent jobs are being eliminated. Those who do not possess essential basic skills are likely to find

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fewer and fewer opportunities to earn replacement wages.

Importantly, the provision of basic skills is also the area of public spending that yields the highest returns on investment. The findings of a literature survey by George Psacharopoulos, an economist with the World Bank, show diminishing returns on public

investment at higher levels of education, which cost more and, therefore, return less.⁸² In an analysis of the work of Psacharopoulos and other researchers, the *Economist* concludes that, given the constraints of limited public budgets, additional spending on primary education is likely to offer the best value for money.⁸³

Recognizing the provision of basic skills as the principal public responsibility does not suggest that state government's involvement in vocation-specific training is inappropriate. Rather, it suggests that the state should rely more heavily upon the involvement *and* the contributions of the business community for the provision of skill-specific training from which the business community derives the most direct benefits.

⁸² Psacharopoulos, G. (1993, January). Returns to investment in education. Policy Research Working Paper 1067. NY: World Bank, as cited in: Anonymous. (1994, March 26). Schools brief: Investing in people. *The Economist*, 85-86.

⁸³ *Ibid.*, 86.

Maintenance of a quality system of higher education is also critical to our future, but if the formidable obstacle of undereducation is to be removed from the path to prosperity, the institutions of higher education, particularly the community colleges, must become more involved in closing the Commonwealth's basic skills gap. Developmental programs that enable participants to close critical knowledge gaps, for example, should be fully funded throughout the community college system, as well as outreach initiatives that help broaden engagement of citizens within an institution's reach.

Processes for tapping the wealth of knowledge and research at the university level should be developed to inform the design of "best practice" programs and the measurement of outcomes, as well as to elevate overall quality. As in many other arenas, the higher education community also must bring attention to the need to establish appropriate curricula and credentials for much-needed adult educators.

A "foundation first" approach would require a concerted effort to bring those who are outside formal work systems—welfare recipients, the unemployed, undereducated and the poor—into training and education opportunities. As Jesse L. White Jr., federal co-chair of the Appalachian Regional Commission, observed in a Louisville speech to the Partnership for Kentucky School Reform, "The test of an advanced industrial country is not how well it educates the top 50 percent, but how well the country educates the bottom 50 percent."⁸⁴

As in virtually every other arena, coordination of the various roles of state government is essential. Any comprehensive strategy to improve the basic skills of Kentuckians must, for example, be linked to welfare reform. If we are to successfully remove the barriers that prevent participation in the labor force, we must fashion a welfare system that rewards and strongly encourages educational pursuits in and out of the workplace, and fully addresses critical issues, such as child care and transportation, that inhibit participation. The 1994-1995 Commission on Poverty has recommended that the Workforce Development Cabinet and the Council on Higher Education determine need for campus-situated child care as a first step toward meeting it. Such on-site facilities could play multiple roles, serving as training vehicles for child care specialists and employers and trainers of welfare mothers.⁸⁵

It is also critically important that initiatives aimed at closing Kentucky's basic skills gap recognize and accommodate the state's rural character. David Freshwater, who serves as the director of research for the University of

⁸⁴ White, J.L. (1995, April 13). Untitled speech to Partnership for Kentucky School Reform, Louisville, KY.

⁸⁵ Legislative Research Commission (LRC). (1996, March). *The activities, findings and recommendations of the 1994-95 Commission on Poverty*. Frankfort, KY: LRC, 74.

Kentucky's Center for Rural Studies and as an associate professor of agricultural economics, observes that programs aimed at expanding rural employment "must deal effectively with small numbers of people."⁸⁶ In order to expand opportunity in rural areas, governments, Freshwater suggests, should focus on the flow of information about jobs, support for employer-based skill development, increasing the capacity of the educational system to foster lifelong learning, and linking those with limited skills to opportunities to earn income.⁸⁷

JUST AS HIGHER EDUCATION must refine its delivery system to accommodate the needs of a changing context, so too must adult education programs. Beyond the most obvious needs of the undereducated, more and more adults find yesterday's education inadequate to meet the challenge of today's workplace. Public responses must accommodate widely varying needs. Intensive marketing campaigns; grassroots outreach programs; vigorous attention to the child care needs of single parents as well as to transportation needs that inhibit participation, particularly in rural communities; accessible community-based opportunities to learn in alternative, age-appropriate settings during convenient hours and days; and access to distance learning technology represent just a few of the ways public

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programs can reach those who need to expand their educational foundation.

According to Teresa Suter, Commissioner of the Department for Adult Education and Literacy, some of the state's most successful programs are

tied to educational reform. They provide opportunities for parents and children to learn together. Collaborative initiatives with public and non-profit service organizations, churches, unions, volunteer groups and others should be broadly expanded in an effort to extend public reach, minimize cost and maximize impact. In short, closing Kentucky's basic skills gap should become our overriding mission, one that extends beyond assuring increasing rates of high school graduation to the assurance of core competencies. As Suter observes, one of our most significant problems lies with the population

⁸⁶ Freshwater, D. (1995, October 1). Policy alternatives for stimulating rural employment. Paper presented at International Symposium: Perspectives on Rural Employment, Coaticook, Quebec, 17.

⁸⁷ Freshwater, 17.

of citizens who possess diplomas, even degrees, but not the skills normally associated with them.

To that end, unprecedented vigor must be brought to the task of reaching undereducated members of Kentucky's workforce. An aggressive campaign to meet this critical public *and* private need should be aimed first at engaging employers, who invest little in basic skills training but stand to gain a great deal. The ability of Kentucky firms to compete in the global marketplace hinges upon fundamental workforce capabilities. High-performance organization, which we discuss in detail in the following chapter, demands high levels of worker participation and a strong basic skills foundation. Employers can be enlisted in the effort to close this state's basic skills gap through collaborative public-private initiatives that provide impetus, incentives, time and opportunity to upgrade skills.

If the strategy of providing capital to businesses for training and education continues to be utilized, it should first serve the overriding goal of closing our basic skills gap. Such a strategy is far more logical and potentially far more beneficial than investing in low-skill job training or extending tax incentives to low-skill industries. An alternative strategy to capital for industries is that of publicly financed wage subsidies that will enable undereducated Kentuckians to become employed and, at the same time, gain access to education that will provide the basic skills they need in order to advance and stay employed.

University of Kentucky survey results show that state residents recognize basic skills deficiencies as a major reason for declining U.S. competitiveness. Almost 60 percent (57.4 percent) of respondents to an October 1994 survey indicated that the lack of basic skills needed to participate in today's workforce was a "major reason" for diminished competitiveness.⁸⁸ The public also strongly favors incentives to employers who provide opportunities to improve skills. More than half (54.6 percent) of Kentuckians favor giving tax breaks to companies that hire unskilled or illiterate workers and help them learn basic skills.⁸⁹ And an overwhelming 85.8 percent of Kentuckians voice support for the general concept of incentives to employers who provide programs to train and upgrade worker skills.⁹⁰ Basic skills, rather than skill-specific training, which is not portable and not broadly beneficial, should be given the highest priority in any incentive program aimed at encouraging employer investment in training.









⁸⁸ University of Kentucky Survey Research Center. (1994, October 25). Crisis in the work force: help wanted (survey results), University of Kentucky, Lexington, KY.

⁸⁹ Ibid.

⁹⁰ Ibid.

The Workforce Development Cabinet has entered into cooperative agreements with employers, such as Versailles-based Texas Instruments, that have enabled employees to successfully participate in the applied learning of basic skills. Besides increases in worker productivity and quality, many employees were also able to obtain GEDs. By providing trained personnel

POLICY OPTIONS

-  Make the cultivation and advancement of basic skills the cornerstone of workforce development
-  Set precise, ambitious program goals and enable aggressive pursuit of them
-  Cultivate broad engagement—public, private and non-profit—in setting and achieving goals
-  Formally engage state universities in program design, outcome measures and the development of credentials for adult educators
-  Provide flexible funds for marketing, outreach and alternative programs
-  Create financial incentives for programs to accommodate work schedules, and the needs of rural residents and families with children
-  Broaden commitment to individual skills assessment and training in the workplace
-  Consider wage subsidies in exchange for employer commitment to job opportunities and basic skills training for under-educated workers

who conduct individual assessments, deliver individualized instruction, and train trainers, the abilities of firms to close critical basic skills gaps that adversely affect both productivity and profitability can be enhanced.

Importantly, the Cabinet's Department for Adult Education and Literacy is broadening its commitment to workplace skills assessment and individualized instruction. Such an individualized approach to workplace education and training warrants substantial public support. Mississippi, for example, has enacted a Skills Enhancement program that provides individualized workplace skills assessment and a curriculum designed to meet individual needs. The program has enabled firms such as Mississippi's Delta Wire, which produces high carbon steel for use in automobile tires and cables, to

transform an undereducated, relatively unskilled workforce and achieve a culture of workplace learning.

"There is the potential in every human being that can be brought forward with training, work, team spirit and encouragement," Delta Wire President George Walker told attendees of a 1995 Southern Growth Policies Board conference on economic development initiatives in the South. The most significant obstacle to overcome, Walker observed, is worker attitude.⁹¹ In many cases, however, employer resistance to involvement may be equally

⁹¹ Walker, G. (1995, May 8). Workforce training to enhance competitiveness (presentation for panel discussion). Emerging Economic Development Strategies in the South Conference, Southern Growth Policies Board, Tupelo, Mississippi.

formidable. The task of the public sector is to educate both employers and employees about the myriad benefits of basic skills enhancement and education and enlist broad cooperation and commitment.

The level of skill workers possess will ultimately determine the level of prosperity in our future. Because labor force quality has become a principal factor in industrial site selection,⁹² it will determine our ability to attract and retain industries. By elevating the quality of our labor force, the Commonwealth can become a far more compelling location and one fewer enterprises will find reason to leave. Moreover, a strong basic skills foundation will enable firms to move more rapidly toward high-performance organization, which is critical to their success in the international marketplace.

By liberating our state from the mantle of undereducation, we can propel high skills development, cultivate a learning culture, and take a critical first step towards broadening prosperity, government's pre-eminent mission.

Think Small

JUST AS BASIC SKILLS form the foundation for learning, small firms form the economic backbone of Kentucky. Again, applying the *triage* approach to public investment in training, either through direct infusions of capital or capacity-building training strategies, it is both illogical and unwise to invest disproportionately in the skills enhancement of large firms. Large firms typically possess the resources to provide training, recognize the importance of doing so, invest in training as a matter of routine, and realize higher returns from their investment due to economies of scale.

Small firms, on the other hand, often lack the necessary resources to train and educate workers, may not recognize the potential benefits of such training, and often do

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not realize a sufficient return on investment in training due to the high cost of training per worker. Again, 98 percent of Kentucky's firms employ fewer




⁹² Lyne and Venable.

than 100 people. The Commonwealth's future likely depends upon the competitive vitality of small firms and the skills their employees possess.

While smaller U.S. companies close or downsize at about the same rate as large companies, they open and expand much more quickly.⁹³ During 1995, firms with fewer than 100 employees were expected to account for almost two-thirds of all new jobs while an estimated half of new jobs were expected to be created by firms with fewer than 20 employees, according to an outlook survey by Dun & Bradstreet. In contrast, large employers, those with 1,000 or more workers, were expected to create only about 3 percent of the nation's new jobs.⁹⁴ The Small Business Administration reported in February 1995 that its research showed micro-enterprises, those with fewer than 20 employees, had created 2.6 million new jobs between 1989 and 1991, an era of corporate downsizing and recession.⁹⁵ Importantly, small firms also created more high-paying jobs while large firms continued to shed them.⁹⁶

Again, the community college system's BITACs offer new and emerging small businesses and micro-enterprises free consultation. With appropriate outcome measures in place to determine the effectiveness of services, this

POLICY OPTIONS

-  Make development of the workforces of Kentucky's small enterprises a priority that supersedes training investments in large firms
-  Reserve investment in training for large firms for business retention or attraction goals only
-  Expand support for small and micro-enterprises through such entities as the community college system BI-TACs

important support mechanism for Kentucky's smallest and most vulnerable firms should ultimately be made available statewide.

While Kentucky's economic future depends upon the continued health of its large firms, most do not need public assistance to meet the cost of training and educating their employees. Instead, they have made long-standing commitments to enhancing worker skills and organizational excellence, a commitment that often reaches beyond the immediacy of the

workplace. Kentucky's large firms have contributed to local schools, state universities, the organizational excellence of supplier firms throughout the state, leadership development, and the advancement of education in general. The contribution many of these firms can make to the larger cause of creating a culture of learning is immeasurable.

⁹³ Capell, P. (1995, October). Small companies dominate growth. *American Demographics*, 17.

⁹⁴ Ibid., 17-18.

⁹⁵ Phillips, B.D. and Berney, R. (1995). Small business and job creation: an update. Washington, DC: Office of Advocacy, Small Business Administration.

⁹⁶ Ibid.

Build Industry Networks

WHILE PUBLIC INVESTMENT in workforce development should place a priority on the Kentucky businesses and industries which need them most, the cost remains formidable. Consequently, the most efficient delivery system must be sought. Industrial networks, an internationally recognized model, offer maximum efficiency in that they enable firms to pool resources, minimize the cost of training per worker and learn from one another.

Kentucky state government has begun to address the problem of under-capitalized small businesses through the promotion of industrial networks that enable like or similar enterprises to market their products jointly, share knowledge and information, vertically integrate production to add more value to products, or pool resources.⁹⁷ Through the latter, resource networks, firms can lower the cost of training by sharing equipment, personnel, space, costs, etc.⁹⁸ The underlying reason for establishing networks of industries or small businesses is clearly economy of scale. Smaller firms can achieve a great deal more if they pool resources.⁹⁹

The Cabinet for Economic Development recently launched a program called the Networking Initiative to help Kentucky's small- and medium-sized businesses establish training and development networks. The Networking Initiative originally allocated training grants to consortia, or business networks, but that responsibility has been shifted to the Bluegrass State Skills Corporation. According to William Morris, an Industrial Development Representative in the Business and Technology Branch of the Economic Development Cabinet, the Networking Initiative now focuses primarily on assisting firms in the development of production networks that vertically integrate manufacturing processes and marketing networks. Morris cited the limited funds available for network development, approximately \$150,000 for 1995, as the reason learning networks development was shifted to BSSC, which now gives special preference to training networks.



⁹⁷ Bosworth, B. (1995, January/February). Interfirm cooperation: the points of intervention. *Firm Connections*, RTS, Chapel Hill, NC, 3:2, 5.

⁹⁸ Ibid.

⁹⁹ Schirmer, P. and Taylor, M.A. (1995). *Farms, Factories and Free Trade: Rural Kentucky in the Global Economy*. Frankfort, KY: Kentucky Long-Term Policy Research Center.

The effectiveness of industrial networks may also depend upon the proximity of resources to need. Rather than create a separate, centralized bureaucracy dedicated to the development of networks, a more cost-efficient and potentially more effective approach may be the utilization of technical, vocational, community college, economic development and other professionals in local communities to identify training needs and forge links between businesses and industries. As we observe in our recent studies of rural development in the global context, *Reclaiming Community*, *Reckoning with Change*

POLICY OPTIONS

-  Aggressively cultivate industry networks to strengthen public and private training capacity
-  Use public training dollars as an incentive for network engagement

and *Farms, Factories and Free Trade*, enhanced community capacity is key to development. To enhance capacity, more resources must be made available at the local level, including individuals who promote and cultivate industrial networks.

In order to utilize public resources as wisely as possible, exploration of networking possibilities should be a precondition of any expenditure for training. In the case of small businesses, it is nearly an imperative.

Engage Stakeholders

JUST AS THE PRIVATE SECTOR has begun to unleash the power of frontline workers to change work systems, the public sector must bring those with a vested interest in its outcomes into the process of planning and executing workforce development strategies. In an era of fiscal restraint and expanding public need, government confronts a challenge it cannot meet alone. Nor should it try to do so. Even virtually unlimited public resources will not address the central challenge of building strong institutional links between the public and the private sectors, between publicly provided training and education and the real workplace. Ultimately, the private sector, as well as representatives of workers, must be given a seat at the decisionmaking table if representative firms are to become more active and more engaged in the challenge of preparing workers for the future.

As the National Center on Education and the Economy observes, building a new social compact is critical to the reform of workforce development initiatives.

*State governments have recognized that they have little hope of changing the system alone. Strong participation from business and labor leaders, educators, training providers and government is essential. Recently, states have begun to recognize that the private sector has been the missing partner in planning and implementing state-wide workforce development systems. Yet few states have figured out how to help organize a significant private sector voice in these systems.*¹⁰⁰

A number of states, however, have begun to extend greater decisionmaking authority about workforce development programs to local or regional entities with strong stakeholder representation. Massachusetts pioneered an inclusive governance strategy with development of its MASSJOBS Council and Regional Employment Boards in 1988. Regional boards identify workforce trends and channel resources to meet them.¹⁰¹ In Oregon, the Workforce Quality Council unites representatives from business and labor, as well as the public sector, on a “super board” that sets standards, promotes high-performance organi-

zations, develops business and labor capacity to direct education and training programs, coordinates service delivery, ensures equity, and maintains commitment to statewide benchmarks.¹⁰² In Wisconsin, a newly created Human Resource Invest-

By engaging business and labor, the Commonwealth could begin to apply the democratic lessons of organizational change to governance, to broaden involvement in planning and to increase public ownership of the process of discovering solutions to common problems.

ment Council coordinates training with labor market initiatives.¹⁰³ In Mississippi, community college governing boards with member majorities from the business community shape curricula in an effort to meet future training and employment needs with a supply of skilled workers.¹⁰⁴

In contrast, Kentucky's present fragmented delivery system has led to a profusion of "advisory" roles for the private sector but no coordinating or decisionmaking role. These private sector advisory groups make a significant

¹⁰⁰ National Center on Education and the Economy (NCEE), 9.

¹⁰¹ Ibid., 56.

¹⁰² McCarthy, K. and Lashman, R. (1994, May). *Workforce development: building statewide systems*. Denver: National Conference of State Legislators; Cambridge: Jobs for the Future, 15.

¹⁰³ NCEE, 107.

¹⁰⁴ Southern Growth Policies Board. (1995, May 8-9). *Emerging Economic Development Strategies in the South*. Conference, Tupelo, MS.

contribution to the relevancy and timeliness of courses of study at a range of institutions, but a stronger, more participatory and fully institutionalized role will ultimately be required. While we have extended unprecedented authority to shape state economic development policy to majority private sector representation on the Economic Development Partnership Board, we have not fully engaged private sector representatives in a planning and policymaking role for workforce development, which profoundly influences their long-term viability and profitability.

Not only must business *and* labor be brought to the decisionmaking table, policies, programs and budgetary allocations must enable contributions from those closest to the economic realities of individual labor markets. Additional resources—personnel, information, technical assistance, and funds—should be shifted to the local level to enable engagement, informed participation and decisionmaking. In doing so, the Commonwealth could begin to apply the democratic lessons of organizational change to governance, to broaden involvement in planning and to increase public ownership of the process of discovering solutions to common problems.

LEGISLATION INTRODUCED but not passed in its entirety during the 1994 regular session of the General Assembly sought to address the need for stakeholder involvement. HB 475 effectively declared an emergency and predicated its proposals on the assumption that, “all Kentuckians will be afforded opportunities to participate in a sustainable economy that provides economic security through a system of quality, lifelong learning and globally-competitive workplaces with higher paying, highly skilled jobs.” A companion bill, SB 195, which established an important mandate for an adult learning system, passed, but the public-private link was not officially forged.

HB 475 would have created both employer and employee incentives for training. It established an employer training tax credit not to exceed \$1000 per employee with 50 percent of the amount *to be paid to the employee* for whom the credit is allowed. Further, it aimed to achieve its ambitious goals by consolidating the planning and budgeting functions of federal and state programs concerned with workforce development at the state and regional levels.

The main component of the bill would have created the Kentucky Workforce Alliance, consisting of nine members within state government and eight regional workforce alliances. The state-level Alliance would “serve as a statewide systems integrator requiring fragmented programs to address a common vision with compatible goals” and oversee the activities of the regional alliances. As envisioned by authors of the legislation, the main duties

of the Kentucky Workforce Alliance would have been to design and implement a statewide and regional planning process for delivery of workforce training, oversee the drafting and implementation of regional workforce plans, set performance standards for regional plans, develop benchmarks to evaluate the plans, and submit a budget request for these plans. It would have established a give-and-take process, one that ideally would have balanced local/regional interests and the overriding goals of the state.

Under the proposed legislation, the state would have been divided into eight regions, consistent with the Kentucky Department of Education's eight regional service centers, each with a 17-member regional workforce alliance charged with the task of creating a regional workforce plan. Each biennial plan would be required to address:

- training programs and services to be offered in the region;
- measures to eliminate gaps in and duplication of programs and services;
- goals for the region, with "specific outcomes to be achieved on a set time frame";
- training needs of industries, "particularly those willing to invest financially in their workers or through apprenticeship and internships"; and,
- training programs designed to create high-performance workplaces and workers.

The legislation would have effectively decentralized and diffused control of workforce development programs; placed some decisionmaking authority closer to real need and the providers who meet it; assured alignment with an overriding vision and goals for workforce development; and given the private sector a critically important seat at the decisionmaking table. With formal establishment of a strong role for both employers and representatives of employees in shaping workforce development policies, the public and private sectors can jointly begin to explore strategies for providing an adequate base of funding to meet the needs of workplaces and workers throughout the state. In California, for example, the public and private sectors contribute jointly to a training fund.

The bill also recommended that the Cabinet for Workforce Development "administer an adult education learning system as an integral part of the regional plan for workforce training in each of the eight regions." These services would include essential skills training, literacy, adult basic education, adult secondary education, family literacy, and English as a second language, all provided at multiple sites throughout the region.

The proposed legislation was the product of an “Investing in People” initiative sponsored by the National Conference of State Legislatures and Jobs for the Future. The initiative joined a diverse group of knowledgeable participants from the public and private sectors in a year-and-a-half-long effort to shape a long-term policy for workforce development. Extraordinary time and energy went into the effort to construct a more responsive, more effective institutional delivery system. The group clearly recognized the need to institutionalize a public-private alliance, one that virtually every document on education and training assures us is critical to the success of workforce development initiatives.

POLICY OPTIONS



Create a formal mechanism to engage business and labor in setting workforce development goals, planning training strategies, shaping regional or area budgets, and eliminating programmatic overlap

This proposed legislation offers an important foundation from which policymakers can work toward developing a strong public-private partnership, better defined public and private roles, and a more responsive public system. Importantly, it also presents the opportunity to build critical social capital at the local level, to more fully engage local in-

stitutions and providers in the work of planning for the future and delivering the services citizens want and need. It should be revisited, revised to fit the current situation, and adopted to achieve the goals set out in this report, as well as many others.

Conclusion

WITH REMARKABLE CONSISTENCY, informed observers conclude that a lingering and inadequately addressed obstacle to more effective workforce development systems is the absence of an institutional link between the public and private sectors. In order for Kentucky to realize maximum returns on its investments in workforce development, it must define the public role more precisely and create an institutional bridge between public workforce development initiatives and the real stakeholders—workers and enterprises.

One of the public’s primary roles is to provide equal and broadly accessible opportunity for the development of basic skills, the essential foundation

workers must possess in order to prosper in today's economy. Such investment not only offers the highest potential return on public investment, it addresses the fundamental weakness that continues to inhibit the Commonwealth's economic development, that of persistent undereducation.

Investments in workforce development must be focused first and foremost on the small enterprises that form the backbone of Kentucky's economy and hold perhaps the greatest promise of high-wage jobs in the future. In order to achieve critical economies of scale in our training investments, the cultivation of industrial networks must become a principal focus of workforce development initiatives. Finally, an institutional framework that will extend a strong decisionmaking role to stakeholders at the local level must be constructed.

These recommendations suggest a primary focus for public investment and a means to shaping a more responsive, more effective workforce development system through stakeholder engagement. The challenge of developing the full potential of Kentucky's workforce simply cannot be met by the public sector alone. Consequently, public investment must be targeted toward those areas of greatest need *and* greatest opportunity. Finally, stakeholders must become fully engaged in shaping a workforce development system that will serve the Commonwealth into the 21st Century.

MAXIMIZING RETURNS ON PUBLIC INVESTMENT

The public must and will be served.

William Penn, 1693

CLEARLY, *BALANCING PUBLIC AND PRIVATE ROLES* in workforce development and forging strong institutional links between the two sectors will help achieve higher returns on public investment. But more must be done. Government must become a more focused, flexible and responsive provider of quality, customer-oriented services. Indeed, the demand for accountability, for programs and policies that garner real, measurable returns on public investment, is perhaps unprecedented. And, arguably, no government role is more important than the education and training of the present and future workforce. Consequently, significant public pressure exists to create systems that yield the highest possible returns on public investment, returns that make a difference in the lives of citizens.

In order to realize the critical goal of developing the full potential of our workforce, we must fashion a holistic strategy for workforce development that addresses the unique needs of the Commonwealth. As the Governor's Commission on Quality and Efficiency noted in its 1993 report, two common threads typically inform the efforts of states engaged in aggressive strategies to develop human capital:

- 1) *Integration of systems that enable, support and sustain worker productivity is key.* The delivery of all social services—from child care and education, to career counseling and training—is recognized as part of a single system driven by common standards.
- 2) *Investing in the skills of the future and current workforce is not enough.* Strategies to ensure that companies reorganize work to compete successfully in a global marketplace are critical. A common fear in leading states is that the time, effort and substantial resources they are

dedicating to improving workforce skills will not be matched by high-skill, high-wage job opportunities.¹⁰⁵

In order to maximize returns on public investment in workforce development and achieve optimum outcomes, we must bring critical focus to the challenge of integrating service delivery and better utilizing the many resources we have at our disposal. The substantial technological infrastructure we now have in Kentucky, for example, must be focused on extending learning opportunities to Kentuckians—regardless of where they live and what circumstances shape their lives.

To achieve our goals for workforce development, we must establish and maintain a solid foundation of information that will guide and inform policies and enable a higher quality of service. As researchers Robert Zemsky and Penney Oedel observe, all answers begin with accurate information.¹⁰⁶ Consequently, we must cultivate what economic development researcher R. Scott Fosler terms “a new generation of institutional intelligence” to inform and guide policy at all levels. “State government needs to conceive of itself as a learning system encouraging a constant flow of useful and usable information coming from whoever has it and moving to whoever needs it. And it needs to continually train its own employees across all positions in generating and applying such knowledge.”¹⁰⁷

By doing so, state government will move toward becoming an exemplar of the high-performance organization it must encourage throughout the private sector. In order to address the demand side of the workforce development equation, it will be necessary to cultivate a market for high skills throughout Kentucky, to help firms move toward high-performance organization. Firms that value and encourage education and training and adopt participatory management styles will be far more likely to survive in a globally competitive environment and continue contributing to the state’s economy. Research suggests that public investment in training for low-skill, low-performance firms is, at best, ill-advised.

As we advance a comprehensive strategy for workforce development, structural realignment may be necessary. While the optimum organizational structure is not likely to exist in another state with dissimilar social and economic circumstances, our present delivery system is characterized by unnecessary obstacles for students and insufficient cooperation between institutions. Ultimately, institutional rivalries must be set aside, collaboration must be strongly encouraged, and new, more demanding, future-oriented per-

¹⁰⁵ Governor’s Commission on Quality and Efficiency, 5.

¹⁰⁶ Zemsky and Oedel, 6.

¹⁰⁷ Fosler, 3.

formance standards must be adopted if the long-term interests of the Commonwealth are to be served.

Think and Plan Strategically

WHILE THE OVERRIDING GOALS for workforce development in Kentucky are abundantly clear and the subject of little disagreement, a holistic strategy for realizing them is not. Dozens of advisory boards and committees engage the private sector, but the institutional link between employers and training and education programs has yet to be forged. And, in spite of significant efforts to consolidate the state's workforce development delivery system, it remains poorly integrated. Consequently, the enormous energy and resources that a range of institutions pour into strategic planning seldom reach beyond programmatic boundaries. Because only a coordinated, interdependent system will produce preferred outcomes, the results of this extraordinary investment are neither strategic, nor in the fullest sense of the word, a plan.

A Framework for Decisionmaking

IN SPITE OF THE DIFFICULTIES that interagency and public-private cooperation pose, an inclusively developed strategic plan for workforce development appears essential. Indeed, the development of a "comprehensive training strategy to include all relevant state providers of training and support" was the first recommendation to emerge from the Governor's Commission on Quality and Efficiency in its report on workforce training. The report concludes, "It is essential to coordinate governance."¹⁰⁸ The services of state and local agencies must be integrated into a single system with uniform standards that is highly responsive to the needs of citizen customers.

¹⁰⁸ Governor's Commission on Quality and Efficiency.

A strategic plan would align and integrate the missions and roles of agencies and institutions, recognize and accommodate the larger social and economic context, and establish:

- a clear, concise vision for workforce training and education;
- goals—urgent, short-term and long-term;
- strategies and time lines for realizing goals; and,
- benchmarks for measuring program outcomes, as well as overall progress.

The effectiveness of benchmarks obviously depends upon the establishment of uniform standards, based upon competency or mastery, rather than discrete criteria. All relevant training and education institutions must come to agree-

ment on those standards, ways of measuring them, and ways of ensuring their institutionalization.

POLICY OPTIONS



Shape a long-term, inclusive vision for workforce development, goals for realizing it, a time line for achieving goals, and benchmarks for measuring progress

With a strategic master plan in place, agencies and institutions can engage their collective energies in creative solutions to long-standing problems, achieve the level of collaboration and cooperation that is

essential to success, and rise above political and institutional rivalries that have historically inhibited the effectiveness of our system of educating and training Kentucky's workforce.

As illustrated, Washington State's Comprehensive Plan for Workforce Training and Education suggests the characteristics of the ideal workforce training and education system. In order to achieve the ideal here in Kentucky, it will be necessary to engage representatives from education and training; social welfare agencies; economic development, industry and labor leaders; and interested individuals from across the Commonwealth in a dialogue about the future of workforce development. Moreover, it is essential that we create an institutional framework for maintaining that dialogue and ensuring broad-based commitment to its realization. While considerable consensus exists about workforce development issues, it is important to enlist broad support for the concept of a shared vision and goals *from the outset*. Ultimately, participation in the realization of any plan will depend upon the level of ownership key parties claim.

The ideal workforce training and education system would:

- ⇒ *Be customer driven—organized around the needs of students, workers and employers;*
- ⇒ *Be easy to find and enter, and be designed so that people can move easily among and between programs, and between programs and the workplace;*
- ⇒ *Meet the needs of all learners, including those who have been underserved in the past because of racial, ethnic or cultural differences; gender; disability; or learning style;*
- ⇒ *Provide support services such as career counseling, child care and financial aid to those who need them;*
- ⇒ *Be competency-based, so that all students are able to master the skills and knowledge they need in as much or as little time as they need to do so;*
- ⇒ *Be staffed by people who are prepared to teach a diverse student body, and who have relationships with employers that help them stay up-to-date on changes in their fields;*
- ⇒ *Be coordinated with private sector training programs, with social and other services, and with economic development strategies;*
- ⇒ *Be based on full partnerships between business, labor, and training and education representatives;*
- ⇒ *Promote the dignity of work and the value of workforce training and education;*
- ⇒ *Rely on the best labor market information, so that people acquire skills that local industries need;*
- ⇒ *Provide students and workers with a foundation of basic skills that equip them to be lifelong learners; and*
- ⇒ *Be accountable for results, and committed to using outcome measures to continuously improve program quality.*

Source: Washington State's Comprehensive Plan for Training and Education, 1994

Cultivate “Institutional Intelligence”

*I*N VIRTUALLY EVERY ARENA, “institutional intelligence”¹⁰⁹ offers government the opportunity to fit policies, programs and increasingly scarce public resources more precisely to the long-term needs of citizen-customers. Precise data are critical to the realization of goals for a high-skills workforce. The need for institutional intelligence is echoed in a number of the ideal characteristics Washington State’s plan suggests. Ongoing maintenance of a comprehensive base of data will also permit the periodic measurement of programmatic effectiveness over time, as well as necessary and appropriate adjustments to goals, policies and programs. In short, decisions based upon reliable, timely data are far more likely to succeed.

The collection, utilization, dissemination and ongoing maintenance of information is becoming a vitally important public role, one that mirrors the transformation of management roles in the private sector. Increasingly, management of public agencies involves the lower cost and, arguably, higher impact strategy of facilitating or supporting action at the point of contact with citizen/customers, rather than direct-service delivery. The emerging public

... who needs education and what social and economic circumstances influence their ability to secure it should shape institutional missions, policies and programs.

roles of information analysts, technical advisors and facilitators are by-products of organizational change, which recognizes the importance of empowering those closest to service delivery and targeting efforts and resources, in this case, information, at that level. This shift in public roles

soberly recognizes the inability of government to be all things to all people and represents a more economical and potentially more effective use of limited government resources.

Education researcher Aims C. McGuinness, Jr., formerly with the Education Commission on the States and now a private consultant with the National Center for Higher Education Management Services based in Boulder, Colorado, emphasizes the importance of understanding the “client base” of education and training institutions and working outward from it. McGuinness suggests that “the issue of demand”—who needs education and what social

¹⁰⁹ Fosler, 10.

and economic circumstances influence their ability to secure it—should shape institutional missions, policies, and programs.¹¹⁰

Similarly, David W. Stevens, director of the Regional Employment Dynamics Center at the University of Baltimore, offers what he terms “a recursive model of state action to affect adult workforce quality,” a process or “continuous flow” that relies upon:

1. Documentation of current adult workforce attributes and current institutional capacities to advance the quality of the state’s workforce;
2. Decisions about absolute thresholds of quality for all adults who come in contact with state programs that are comparable to standards in other states; and,
3. Recurring modification of goals, actions, policies, etc.¹¹¹

Stevens, like McGuinness and many others, underscores the importance of comprehensive information about need and the capacity to meet it as a critical first step for state action aimed at building workforce quality. By concentrating on the needs of customers or clients, not on creating more programs, a recommendation which emerged from a 1993 National Governor’s Association conference on employment and training,¹¹² Kentucky can garner a higher return on its current investments in workforce development.

The statewide literacy survey now being finalized by the University of Kentucky’s Martin School, for example, will provide an important demographic key to potential demand for education and training across Kentucky. The comprehensive data base developed by the Legislative Research Commission to support the work of a legislative task force on poverty forms another key component of the data which must be routinely and systematically collected. Geographically specific data on race, sex, income, education, employment, unemployment, labor force participation, participation in social programs, child care needs, wages, etc., will help define the client base of institutions, shape institutional responses to their needs and better coordinate services.

With a comprehensive foundation of quantitative information in place, we can develop a far more sophisticated qualitative understanding of social and cultural factors that inhibit participation in post-secondary education and begin to address them systematically through outreach, education, and support

¹¹⁰ McGuinness Jr., A.C. (1995, September). Telephone interview.

¹¹¹ Stevens, D.W. (1992). Advancing adult workforce skills: opportunities and requirements for state action. *EQW Working Papers*, National Center on the Educational Quality of the Workforce, University of Pennsylvania, 3-4.

¹¹² National Governors’ Association (NGA). (1993, November 10-12). *Where are the jobs? Employment and training policy conference proceedings* (Los Angeles, California). Washington, DC: NGA, Center for Policy Research, 14.

services that improve access and expand opportunity. A richer understanding of social and cultural factors will enable a more sensitive, more appropriate public response, one that meets individuals and firms at comfortable entry points.

A solid foundation of information will not be complete without comprehensive data about Kentucky employers, which we cite as a critical element of an overall economic development strategy in our recent report, *Reclaiming Community, Reckoning with Change*. For example, global and regional economic prospects for entire industries, individual firms and their suppliers, as well as the jobs these firms expect to create, are essential economic intelligence that should be routinely collected, analyzed, updated, broadly disseminated, and *used*. Indeed, cultivating institutional intelligence is one of the most important economic development roles state government can play, one the General Assembly has recognized and sought to advance.

In an effort to link training supplies with workplace demand, the Kentucky Occupational Informational Coordinating Committee (KOICC) prepares an annual report for the state and each of its area development districts. The Legislative Research Commission (LRC), however, concluded that KOICC estimates are flawed in a November 1995 report on state workforce

“Our weakest point is labor market information.”

training programs.¹¹³ While a task force has been formed to address the data collection issues, LRC has recommended remedies including more accurate and systematic collection of data on job placement rates from post-secondary programs; rapid institutional responsiveness to that data; and vigorous attention to the skills and attributes employers seek in employees.¹¹⁴

Dr. Michael J. Gardone, Deputy Executive Director of Academic Affairs for the Council on Higher Education, observes that the data collected is insufficient, as only 10 percent of firms are represented in the sample. Moreover, according to Gardone, the information which institutions such as the state’s community colleges must use to plan and implement customized training is dated by the time it is published. As a consequence, limited resources may not be utilized in the most cost-efficient and effective manner. “Our weakest point is labor market information,” observes Gardone.¹¹⁵

At the same time, in order to respond in a timely manner to accurate labor market information, many of Kentucky’s training and education institutions

¹¹³ Yaeger, M.C. (1995, November). Workforce training report (# 272). Frankfort, KY: Legislative Research Commission, 56-66.

¹¹⁴ Ibid., 66.

¹¹⁵ Gardone, M.J. (1996, March 20). Meeting with representatives of Kentucky Council on Higher Education.

will have to become far more flexible in the development and the provision of educational opportunities. For many institutions, this ultimately may require retraining or redeployment of—or cuts in—staff whose credentials are in fields for which there is no longer a demand in the marketplace. Likewise, temporary or permanent, floating staff may be necessary to meet immediate, short-term needs for training and education.

Comprehensive data about future employment prospects would also enable the Commonwealth to make more informed investments in “good jobs,” those which are far more likely to enable prosperity and enjoy sustained demand. By identifying employment sectors that are likely to expand and by cultivating a supply of skilled workers to meet anticipated demand, we can gradually develop a more sophisticated and more effective overall development strategy, one economics professor Patricia M. Flynn suggests is “proactive” rather than “defensive”:




*Defensive state actions such as tax abatements or other financial incentives can quickly lower costs to potential employers and attract relatively large numbers of jobs in a short period of time. However, these mechanisms can undermine long-term economic growth, particularly when the types of jobs recruited are relatively low-skilled and vulnerable to further relocation to areas of even lower cost. In contrast, while proactive strategies will take longer to reduce costs by increasing productivity, the impacts regarding jobs and growth are likely to be of higher quality and longer term.*¹¹⁶

Johnson and Stallmann observe that comprehensive information about larger labor markets also offers critical fodder for decisionmaking to rural youths who might otherwise be discouraged by prospects in their local community. Such discouragement may prompt decisions to drop out of school or forego post-secondary education and training. “The resulting labor force of the community will not be prepared to adjust to future changes in the labor market.” The long-run impact of a strategy focused on accommodating the low skills of a labor force, these researchers conclude, is a future labor force with “little incentive to acquire skills” and a community “stuck in a self-perpetuating cycle of low wage jobs and dropouts qualified only for low wage jobs.”¹¹⁷

¹¹⁶ Flynn, P.M. (1992). Competitive strategies of states: a life-cycle perspective. *EQW Working Papers*, National Center on the Educational Quality of the Workforce, University of Pennsylvania, 21.

¹¹⁷ Johnson, T.G. and Stallmann, J.I. (1994). Human capital investment in resources-dominated economies. *Society and Natural Resources*, 7:230.

POLICY OPTIONS

-  Invest in skilled data analysts, training for existing staff, technology to support data collection, and vehicles for collecting useful and useable data
-  Create formal communication networks for disseminating labor market information and other data to training and education providers in a timely fashion
-  Require publicly funded education and training institutions to develop comprehensive profiles of their client bases, set goals for meeting client needs, develop service plans, and report periodically on progress

In short, Kentucky's institutions of training and education, as well as its agencies of economic development, must become far more informed and far more flexible and responsive to rapidly changing economic circumstances if they are to meet the demand for skilled workers with an appropriate supply and remain accountable to customers. Fosler, who serves as Vice President and Director of Government Studies for the non-profit research institution, the Committee for Economic Development, cites institutional intelligence as a key capacity or capability states must cultivate in order

to achieve economic development: "States . . . need an institutional brain and nervous system that is up to the new challenge of rapidly processing and effectively transforming great quantities of information into usable, and used, knowledge."¹¹⁸

Advanced, refined knowledge is absolutely critical to the success of workforce development initiatives, as well as a host of other public efforts. Without sufficient knowledge, training and education are far less likely to be appropriate to the marketplace and far less likely to be of long-term economic benefit to the Commonwealth and to those citizens who devote time, energy and resources to learning, self-improvement and preparation for a job. The absence of measurable returns in the lives of citizens who are willing to invest in the future ultimately serves as a powerful disincentive to continuous learning. *Applied* knowledge, on the other hand, can help the Commonwealth send an altogether different message to the citizens it serves, one that is visible and immediately understandable: Education changes lives for the better.

¹¹⁸ Fosler, 10.

Extend Our Reach

GENERALLY, THOSE INDIVIDUALS who need adult education and literacy services have fewer resources available to them. Participants in adult education programs often must overcome resource barriers and social stigmatization. Clearly, Kentucky's undereducated population is difficult to reach, engage and motivate, the primary reason why lack of participation in adult education and literacy confounds virtually every one of the 50 states.

In order to deal with the problems facing Kentucky's workforce, we must fundamentally reconsider how we deliver services. The labor-intensive strategies which we now rely upon are costly and geographically limited in their reach. One foundation on which we can build is that of our cache of existing technological resources. KET and the Kentucky Information Highway lie at our disposal, and they offer a means of achieving the economies of scale that inhibit our ability to provide cost-effective services to rural areas and small employers. Unfortunately, we have not yet broadly capitalized on these assets for the purposes of adult education and workforce training.

According to Bill Wilson, Deputy Director of Programming at KET, an estimated 98 percent of the households in Kentucky have televisions. This "paradox of poverty" is that people are willing to invest in television, often to the exclusion of actual needs. Television is viewed as a window to the world, a way out rather than a reminder of one's problems. It can also serve as one of the best means to reach the population in need of adult education and literacy services.

Because it minimizes the barriers of time and distance, television presents one of the best platforms for reaching a broader population. KET already offers a basic literacy series entitled "Learn to Read"; pre-GED programming entitled "Another Page"; a fundamentals of math series entitled "Math Basics"; and a worksite skills enhancement program designed to enable businesses to adapt basic education training to the skill needs of their specific organizations. These programs are broadcast throughout the state via network and cable television. To offer flexibility to those whose work schedules do not permit viewing, videotapes and accompanying instructional materials are available at public libraries and at cost from several public and private organizations.

Educational television alone, however, will not fully address the needs of Kentucky's undereducated adult population. As much as young learners, adult students need interactive reinforcement. Some states have begun to address this need through programs that augment educational television courses. "Teleteacher" in Virginia furnishes such reinforcement and accommodates diverse schedules by providing access to academic assistance 24

Information technology . . . promises to minimize both the cost of adult education and the inequities that exist in access to resources.

hours a day. Alabama utilizes learning centers and home tutors in conjunction with educational television to reach adult students.

Information technology, like television, promises to minimize both the cost of adult education and the inequities that exist in access to resources. Here in Kentucky, we have the technological infrastructure in place to vastly improve the educational resources available to citizens across the state. Computerized instruction is an ideal tool for adult education, as it affords privacy, individually paced instruction, flexibility in scheduling, ready transference of skills, and better-than-average achievement gains for its users. Perhaps most importantly, it offers an interactive educational medium that effectively eliminates a range of obstacles that inhibit access, including inadequate transportation, lack of available child care, disability, and schedule constraints. Also, it permits economy of scale, the ability to reach a wide group of citizens or businesses with modest investment.

The Kentucky Telelinking Network (KTLN), for example, has begun implementation of Star Schools, a federally funded initiative that links eight university hub sites with local classrooms around the state via two-way interactive audio and video. While the network enables multiple uses, its primary purpose is educational offerings at distant sites. At present, 75 interactive video classrooms offer students around the state the opportunity to engage in courses of study that would otherwise be unavailable in their communities. Another 40 classrooms will be on line by the end of September 1996.

Murray State University, for example, offers courses toward an M.S. in nursing at Madisonville, Paducah and Hopkinsville, with the cooperation of the community colleges. Similarly, the University of Kentucky is offering doctoral level courses in education at locations around the state and a Masters of Social Work at Highland Heights and Morehead in cooperation with Northern Kentucky University and Morehead State University. Additionally, video technology will soon permit some high school students to access advanced placement courses at their schools and move closer to gaining college credit for subjects in which they demonstrate proficiency.





More extensive use of technology is, of course, constrained by the same financial limitations that inhibit our abilities in many arenas. Investments in computer hardware and software, as well as nearly continuous upgrades and training, are costly and ongoing. A measure of creativity could, however, yield extraordinary opportunities.

The vast technological waste being generated in the rush to refine computing capabilities, for example, includes innumerable computers that are still operable. Many others can be repaired and retooled for educational purposes. The out-of-service computing equipment generated by state government alone would provide a remarkable beginning. A comprehensive, statewide public-private effort to systematically recycle computer equipment would offer firms an opportunity to make tax-deductible contributions to public education, help abate public costs, and improve the very workforce on which private employers rely. Firms could donate new and used equipment, repair services, software, and technological expertise, and realize a significant return on their investment—a workforce better prepared to meet the challenges of both the present and the future.

In addition to utilizing more of the distance learning opportunities we possess and the equipment we often simply discard, we also must bring new energy and creativity to shaping opportunities for exposure to technology. Working closely with grassroots organizations located throughout the state, for example, we can begin to create small, accessible, user-friendly technology centers in schools, churches, libraries, community centers, senior citizen centers, etc. Such centers could focus on introducing citizens to technology, minimizing fear of it, exploring learning possibilities via

the computer, and introducing citizens to educational options. Every effort to broaden access to technology across the state, regardless of income or location, must be made if this extraordinary learning tool is to yield broad returns for the citizens of Kentucky.

POLICY OPTIONS

-  Continue to invest in and advance the technological infrastructure needed to achieve statewide electronic access
-  Require publicly funded education and training institutions to set goals for distance learning, plan for implementation, and periodically measure and report on progress
-  Create a pool of grant funds to support small community learning centers and home learning networks
-  Establish a joint public, private and non-profit effort to refurbish and redeploy discarded computer equipment for distance learning purposes

Structural Change

The essence of management is to make knowledge productive. Management, in other words, is a social function. And in its practice management is truly a liberal art.

Peter F. Drucker

*U*LTIMATELY, any effort to derive maximum returns from the Commonwealth's investments in workforce development will compel reckoning with the issues of institutional reorganization. In Kentucky, all but one of the "perennial issues" identified by the Education Commission on the States as common triggers for proposed reorganization¹¹⁹ have made their way on to the public agenda in recent years. While there are no current "Proposals to close, merge colleges or universities, or to change institutional missions,"¹²⁰ the Commission's list might otherwise have been compiled to describe Kentucky's recent experiences. It includes:

- *Actual or potential duplication of high-cost graduate and professional programs;*
- *Conflict between the aspirations of two institutions (often under separate governing boards) located in the same geographic area;*
- *Legislative reaction to institutional lobbying;*
- *Frustrations with barriers to student transfer and articulation;*
- *Inadequate coordination among institutions offering one- and two-year vocational, technical and occupational and transfer programs; and,*
- *Concerns about the effectiveness of the state board.*¹²¹

Today in Kentucky, concern is growing about the Commonwealth's ability to respond to the larger and increasingly demanding context, meet public need and manage public resources effectively over the long term. Public institutions built upon enduring traditions must now serve in a new, dramatically changed environment, one that will almost certainly bypass inflexible, unresponsive bureaucracies and, in time, render some of them irrelevant. While the boundaries and the political allegiances of publicly financed institutions are well-defined, the new context is not. Globalization, technology and organizational realignment are changing the circumstances of our lives

¹¹⁹ McGuinness Jr., A.C. (1994). The changing structure of state and higher education leadership. *State Post-secondary Education Structures Handbook, 1994*. Denver: Education Commission on the States, 19-21.

¹²⁰ Ibid.

¹²¹ Ibid.

every day. Failure to anticipate and respond to these changes will almost certainly diminish the effectiveness of education and training institutions.

Organizational change, however, is not simply a matter of redrawing lines of authority or collapsing departments or agencies to achieve presumed efficiencies. Rather, it involves changing the cultures of institutions, fundamentally redesigning the conduct of day-to-day business to focus collective energies on the quality of products and services and on meeting the requirements and needs of, in this case, students, would-be students, and citizens of the Commonwealth. To

effect such change, organizational change theorists underscore the importance of, among other things, creating a fully participatory organi-

Organizational change is not simply a matter of redrawing lines of authority or collapsing departments or agencies to achieve presumed efficiencies.

zation that broadly engages and empowers employees at all levels; shaping and diffusing an organizational vision around the goal of continuous improvement; systematically measuring outcomes; cultivating new leaders through training and education, teamwork, reward and recognition; and fostering a climate of innovation. The latter can only be achieved when organizations become genuinely democratic and thus open to new ideas from all levels.

As we discuss in detail in the subsequent section on high-performance organization, structural change is difficult, costly, time-consuming work for which little public sector groundwork has been laid. But it is work that must be done if we are to achieve higher quality services while lowering the cost of delivering them. And every fiscal indicator suggests that lowering service delivery costs throughout government is fast becoming an imperative. Clearly, it must become an overriding goal for our full workforce development system, for the programs of the Workforce Development Cabinet, which face almost certain cuts in the federal funds on which they rely, and, more importantly, for the full system of state-supported higher education, which is the recipient of a substantial portion of the state budget, almost 15 percent in 1994.

Continue Program Consolidation

A *RECURRING ORGANIZATIONAL ISSUE* in recent years has been the locus of the Bluegrass State Skills Corporation. In spite of the General Assembly's widely hailed efforts to consolidate workforce development programs and give them cabinet-level status, BSSC remains an anomaly. Presently, BSSC is seated in the Economic Development Cabinet, presumably for the purpose of facilitating the utilization of training incentives for locating or expanding industries. The process of consolidation should continue in order to ensure alignment with overriding goals, achieve greater efficiency and effectiveness, and enhance interagency cooperation.

As the Governor's Commission on Quality and Efficiency concluded,¹²² BSSC should be transferred to the Workforce Development Cabinet. While the BSSC model of employer involvement in decisionmaking is one that should be preserved and broadened, full consolidation of Kentucky's workforce development initiatives is desirable for a number of reasons. First and foremost, it offers optimum opportunity to ensure the most productive, beneficial use of public resources. Second, it places critical oversight responsibility in the hands of the agency best equipped to assume it. Finally, consolidation will help ensure administrative and programmatic commitment to the realization of overriding, interagency goals.

POLICY OPTIONS



Continue programmatic consolidation of workforce development initiatives by locating the Bluegrass State Skills Corporation in the Workforce Development Cabinet

While Executive Director Kenneth Carroll suggests that BSSC's separation from the Cabinet for Workforce Development permits it to work independently with other training providers, such as the community colleges, the highly cooperative, collaborative system which must be cultivated would ultimately

preserve and advance such independence in the interest of quality, efficiency and commitment to overriding goals. Logically, agencies that are able to maintain discrete funds for purposes that fall outside their central missions are likely to have little motivation to work closely with other agencies. Only through a highly collaborative approach to meeting a shared vision and goals will the agencies of state government move toward their realization. Pools of

¹²² Governor's Commission on Quality and Efficiency. (1993). *Wake-Up Call for Kentucky: Out of Crisis into Action*. Frankfort, KY: Office of the Governor, State of Kentucky, 82.

agency funds designated for a purpose that falls outside an agency's principal mission appear to create disincentives for collaboration.

While the BSSC's organizational structure and objective approach are highly regarded, a coordinated approach to the realization of a vision of increased prosperity would, in all likelihood, be best realized by one, rather than multiple agencies.

To Merge or Not to Merge?

ANOTHER ISSUE OF RISING CONCERN to policymakers is whether the Kentucky Tech System and the University of Kentucky Community College System should be merged and organizationally restructured. Perceived duplication, apparent competition, lingering obstacles to course transfers between the two systems, and poor coordination, among other things, have prompted many observers to call for a merger of the two systems. They include a University of Kentucky Community College System Futures Commission which recommended in January 1996 that policymakers "work toward a merged system of Kentucky Tech post-secondary vocational-technical schools and centers and the UK Community College System."¹²³ The community college system's attachment to the University of Kentucky is yet another structural consideration called into question by the merger issue.

While the national trend appears to be toward consolidation of technical centers and community colleges, opinions are by no means unanimous. Indeed, education experts have cautioned for decades against the rush to eliminate perceived duplication. In his 1970 book, *Higher Education in the Fifty States*, M.M. Chambers observed, "Fear of 'duplication' of general undergraduate programs is a relic of Depression days and earlier, when public higher education was a very thinly spread enterprise. Virtually all undergraduate curriculums and courses, whatever their labels, contain large infusions of liberal arts or general education, which indeed needs to be 'duplicated' (or better, diffused, diversified, and dispersed) until it is accessible to all citizens."¹²⁴ Whether the fiscal restraint of today has rendered Chambers' observations yet another relic of our recent past is yet to be seen.

¹²³ Commission on the Future of the UK Community College System. (1996, January). *Pathway to Kentucky's Future*. Lexington, KY: University of Kentucky Community College System, 14.

¹²⁴ Chambers, M.M. (1970). *Higher Education in the Fifty States*. Danville, Illinois: Interstate Printers & Publishers, 10-11.

What Kentucky policymakers do see is a system that is less than optimum for a number of reasons. Rather than assuming a cooperative approach to shared missions and responsibilities and realizing the benefits of better outcomes, greater legitimacy, and stronger external support,¹²⁵ a posture of institutional competition between these two systems is evident. Recent research by the RAND Corporation's National Center for Research in Vocational Education suggests that such competition comes at a cost, not only to students, but to the institutions as well. In a study of local systems of vocational education and job training, Grubb and McDonnell found "a stable division of labor and articulation agreements"¹²⁶ reduced instability in enrollment. As one administrator observed, "Cooperation brings more total dollars into the area."¹²⁷

In spite of overtures and evidence of cooperation, relatively autonomous systems are emerging in Kentucky. Along with a number of state vocational/

*Competition comes at a cost,
not only to students,
but to institutions as well.*

technical programs, Kentucky Tech has joined other state technical systems in the formation of a new accreditation organization, the Commission on Occupational Education.

The community colleges remain under the accreditation auspices of the Commission on Colleges Southern Association of Colleges and Schools, which, according to community college administrators, is less than supportive of business and industry. While the relative inflexibility and unwillingness to change evidenced by accreditation bureaucracies is partly to blame for the divide between these institutions, cultural differences also inhibit joint problem solving and agreements that would potentially yield broad benefits.

Methods of instruction used by the community college system and the state's vocational/technical training programs have historically differed. While there is significant overlap in styles of instruction today, the state's technical training and education programs have generally followed an applied learning model that differs sharply from the conceptual model of community college instruction. Vocational/technical students learn by doing. In addition to mastery, diploma requirements are measured in actual hours of hands-on learning, a system that does not mesh neatly with college credit hours.

¹²⁵ Heymann, P. (1987). *The politics of public management*. New Haven: Yale University Press, as cited in Grubb, W.N. and McDonnell, L.M. (1991). *Local systems of vocational education and job training: diversity, interdependence, and effectiveness*. Santa Monica, CA: RAND Corporation, 23.

¹²⁶ Grubb, W.N. and McDonnell, L.M. (1991). *Local systems of vocational education and job training: diversity, interdependence, and effectiveness*. Santa Monica, CA: RAND Corporation, 42.

¹²⁷ Ibid.

The suggestion by opponents of a merged technical and community college system that technical offerings and the vocational approach to teaching will fall by the wayside under an academic model also may be well founded. The Arkansas experience offers a recent example of the latter. “The truth is that without deliberate policy, the academic will drive out vocational-technical,” McGuinness observed.¹²⁸ In an interview with the *Lexington Herald-Leader*, Ron Schilffarth, a statewide coordinator of Vision 21, a business group that supports Kentucky Tech, agreed, “The higher education end tends to control it, and the technical education gets shoved out.”¹²⁹

As they are presently configured, McGuinness notes, the two institutions may be serving a different clientele with far different needs. In the event of a merger, however, one system

clearly becomes dominant. If the academic model becomes dominant, the institutions may become less responsive to individuals with diverse educational foundations. If the vocational model dominates, quality may suffer.

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Ideally, however, a merged system would preserve and even expand opportunity for clients or customers with different educational foundations.

While interdependence between the two systems has increased, the transferability of course work between them remains a point of contention. The division of labor is another. Vocational-technical advocates view a broadening technical focus at community colleges as a product of “mission creep,” an encroachment on the technical training domain. But the authorizing legislation for community colleges clearly envisioned technical education as a role these institutions would play. Whether policymakers intended to have parallel institutions offering the same courses of study and competing for the same students in the same geographic region is another matter. However, in spite of the best efforts of both systems, according to community college Chancellor Ben Carr, the needs of the business community are not being met.¹³⁰

To achieve relative seamlessness between vocational/technical and community college systems, some states have mandated system-wide transfer or “articulation” agreements that ensure the transfer of a specified block of

¹²⁸ Ibid.

¹²⁹ Muhs, A. (1995, December 24). Community colleges, Ky. tech system overlapping. *Lexington Herald-Leader*, A8.

¹³⁰ Ibid.

courses. So-called “one-plus-one” formulas enable students in certain technical programs to blend one year of technical training with one year of college course work and receive an associate degree. Presently, Kentucky’s community colleges and tech schools have nine system-wide agreements in place, according to Anthony L. Newberry, vice chancellor of the community college system. However, the process of reaching such agreements has reportedly been protracted and sometimes acrimonious. Moreover, former Workforce Development Cabinet Secretary William Huston reports that the nine agreements now in place are not uniform throughout the system. A 1995 report on workforce training prepared by the Legislative Research Commission (LRC) concluded that the actual number of articulation agreements between the two systems could not be determined with certainty due to differing reports and changes in curricula by either institution that required continual renegotiations.¹³¹

Within the next few months, seamlessness between the two systems is expected to make substantial progress. Paducah Community College has been a model “one-plus-one” site for two years, and, given anticipated approval by the Council on Higher Education, community college officials expect to diffuse this technical studies model system-wide this summer. According to Newberry, the community college system has “pushed the envelope” with the accreditation bureaucracy, hammering out an agreement on third-party review as an option to approval by faculty.¹³² In cases where the receiving community college had no appropriate faculty in place, no previous path to approval existed.

Workforce Development Cabinet officials are concerned that enrollment in Kentucky Tech programs is being inhibited by the inability of the system to award technical degrees to graduates. At present, graduates of Kentucky Tech programs receive diplomas. Officials cite the example of a Kentucky employer who opted to use a border state school to train employees because of its ability to confer technical degrees. Graduates of Kentucky Tech programs, they observe, are often required to pass the same examinations as community college graduates in order to become certified in their fields. Officials of the state’s community college system oppose permitting the tech schools to confer technical degrees, viewing it as yet another form of “mission creep.”

Critics of institutional obstructions to seamlessness, such as uneven and uncertain transfer agreements and credentialing, argue that students are the real victims. In the absence of a cohesive system of education, an as yet un-

¹³¹ Yaeger, 40-42.

¹³² Newberry, A. (1996, March 26). Meeting with representatives of the University of Kentucky Community College System.

certain population of students cannot build on a viable technical foundation. By contrast, European models permit students to move more freely between technical and academic educational tracks and to build on different educational foundations. Reform advocates also consistently urge movement to a national, even an international competency-based system that awards credentials based upon knowledge and ability, rather than fulfillment of discrete institutional criteria, which often demand redundant course work at additional cost and burden to students.

THE APPEARANCE OF COMPETING state-financed institutions has led some policymakers to look more closely at the possibility of merging the community college and the Kentucky Tech systems. A number of observers have argued that consolidation offers the possibility of higher returns on public investment. Such a move could potentially elevate the quality of technical programs, reduce administrative and infrastructure costs over the long term, and help ensure a seamless path to a degree via technical training. Indeed, expectations of successful graduates of any program will only continue to rise. Consequently, movement toward a more rigorous educational model, one that combines technical and traditional academic curricula, may provide the optimum long-term strategy. Blending these curricula and merging institutions under a common umbrella appears to characterize the current national trend in post-secondary education.

The rather persuasive arguments for consolidation, however, are met with a number of countervailing arguments, the most compelling of which is the organizational disruption and diminished institutional effectiveness that a merge could cause. In order to make an informed decision about merging these institutions, it must first be determined whether the two systems serve altogether different clients or customers, what the cost of a merger would be, how such a merger would contribute to larger goals, and whether alternative actions would achieve the same goals.

Other states have wrangled with systems mergers in recent years. In 1991, for example, Arkansas moved to consolidate its dual systems, establish minimum requirements for entry and exit, and elevate the overall quality of the technical education it was providing. Under authorizing legislation for the merger, designation as a technical institute required institutions to offer three associate of applied science technical degree programs, a strong incentive to upgrade. As a result, 13 of 24 post-secondary technical schools in the state either merged with community colleges or became free-standing community colleges. Most of the remaining 11 schools offer diplomas, two-year certifi-

cates or associate degrees in conjunction with community colleges or universities.¹³³

The vocational-academic cultural split, according to John McKay, Arkansas Deputy Director of the Department of Higher Education for Technical Education, posed the most difficult obstacle to merging the two systems. "Many of the (vocational) faculty saw the loss of clock hours as tearing the program apart."¹³⁴ Mary Ellen Coettel, Executive Assistant to the Director of Vocational and Technical Education Division in the Department of Education, characterized the merger as traumatic. "A lot of people felt they could better accomplish what was needed under a vocational-technical system and not under higher education."¹³⁵

Arkansas' two systems had previously offered only minimally related courses of study even though they were all under a single state board. With the merger, 10 free-standing local boards were created to oversee the new institutions, each of which now offers associate degrees in applied science and art. Eleven vocational-technical schools opted to remain outside the higher education system. "People knew they would be lost in the merger," McKay observed. "One of the things vocational people are afraid of, in our case, is programs that should have been shut down. Vocational-technical never shut anything down because of low enrollment and faculty unwillingness to redesign programs to make them more relevant to today's job market."¹³⁶

In addition to the cultural adaptation, the Arkansas merger came at significant cost, about \$40 million over the course of four years, to develop infrastructure, equipment and personnel. Outdated technical equipment, "a 1960 model operation,"¹³⁷ was upgraded, libraries were established, and the requisite support and instructional staff were developed to meet community college requirements for accreditation. If enrollment is a measure of success, Arkansas has achieved it. Since the merger, student populations at the enhanced institutions have increased by 50 percent to 100 percent, according to McKay. Coettel reports that they have also increased at the vocational-technical schools.

¹³³ Coettel, M.E. (1995, July). Telephone interview with Executive Assistant to Director of Vocational and Technical Education Division, Department of Education, State of Arkansas.

¹³⁴ McKay, J. (1995, July). Telephone interview with Deputy Director of Higher Education for Technical Education, State of Arkansas.

¹³⁵ Coettel, 1995.

¹³⁶ McKay, 1995.

¹³⁷ Ibid.

AIMS C. McGUINNESS, JR., whose research has focused principally on the structure of higher education delivery systems, suggests that state-level solutions may not be solutions at all, although incentives such as those employed by Arkansas policymakers probably offer the most desired route to a more collaborative, seamless system. “All over the country you have the residue of years of (vocational-technical) structure . . . with isolation and insulation . . . still in place, guarding people. Very few states have handled this through sweeping state-level reform.”¹³⁸ And efforts to do so, observes McGuinness, have not worked well in several states, including Vermont, Pennsylvania, Minnesota, West Virginia, Washington and Idaho.¹³⁹

The presumption that the prevailing trend of merged systems should be followed also may not be sound. Writing for the Education Commission of the States in 1994, McGuinness observed, “While lessons can be drawn from other states, there is no perfect model. Conflicts are the reality. The challenge is to resolve those con-

licts as close to the operating level and as close to the real problems as possible. Once issues rise to the level of the governor and legislature, political as opposed to educational values tend to dominate.”¹⁴⁰

Unfortunately, remedial education is usually viewed as a failure of public schools, according to McGuinness, rather than the byproduct of a population of older workers who need training and education.

Similarly, RAND researchers concluded, “There is no mistaking the importance of local initiative in establishing . . . interdependencies.”¹⁴¹

In the United States, almost 50 different patterns and combinations of organization can be observed among post-secondary delivery systems, according to McGuinness. Truly successful examples of the integration of vocational-technical and community college missions, he suggests, are primarily evident in individual institutions, such as Maricopa Community College, which serves the county around Phoenix, Arizona. Ideally, McGuinness suggests, the combined missions should yield “transfer programs that are accepted with little question for upper division work; very good technical programs that are preparing people for immediate employment; and attention to

¹³⁸ McGuinness Jr., 1995.

¹³⁹ Ibid.

¹⁴⁰ McGuinness Jr., 1994, 40.

¹⁴¹ Grubb and McDonnell, 42.

remedial and adult education, employer needs, and short-term needs.”¹⁴² A model combined system would, for example, provide a developmental math program that is both transferable and relevant to vocational students. “You must show a lot of respect for different foundations,” McGuinness observes.¹⁴³

Unfortunately, remedial education is usually viewed as a failure of public schools, according to McGuinness, rather than the byproduct of a population of older workers who need training and education. As a consequence, those who most often fall through the cracks are adults in need of just such educational services. Theoretically, meeting this need should be a mission of community colleges, McGuinness suggests.¹⁴⁴ By addressing this compelling need, community colleges strengthen their horizontal “community” role, one that can be undermined by the vertical role of “feeder” institution for a university.

The imperative of preserving a strong horizontal, community orientation, one that works toward meeting the needs of a regional client base, argues persuasively for a thoughtful exploration of the organizational structure of Kentucky’s community colleges. Many, including Edward Hines, an Illinois State University professor of educational administration who testified before the Interim Joint Education Committee in early June 1995, contend that the “branch campus” role of community colleges in Kentucky has come to dominate other vital roles, including adult, vocational and technical education.¹⁴⁵ However, Newberry counters, the Community College Act of 1962 and subsequent actions by the University of Kentucky Board of Trustees have expressly rejected the branch campus philosophy.

Performance data from the Council on Higher Education (CHE) suggest that the community college system is effectively meeting dual missions of providing technical education and preparation for baccalaureate degrees. While fewer than one quarter of degree-seeking students who entered the community colleges in the fall of 1989 had transferred by 1991,¹⁴⁶ only 37 percent of community college students enroll with the expressed intention of transferring, according to Newberry. The balance of the student population is enrolled in technical or non-degree programs. According to Newberry, research has shown that Kentucky’s community college system enjoys one of

¹⁴² McGuinness Jr., 1995.

¹⁴³ Ibid.

¹⁴⁴ Ibid.

¹⁴⁵ Muhs, A. (1995, June 2). Community colleges, UK should split, expert says. *Lexington Herald-Leader*, A1.

¹⁴⁶ Kentucky Council on Higher Education (KCHE). (1995, December). *Kentucky higher education system: accountability report series of Kentucky higher education*. Frankfort, Kentucky, 33.

the highest transfer rates in the nation, a “much under-valued byproduct of its association with the University of Kentucky.”¹⁴⁷

In a 1995 interview, Hines observed that independence from a university system has become the dominant model in the nation.¹⁴⁸ At present, Kentucky’s community college system is governed by the University of Kentucky, although appropriations to the community college system are a separate line item in the state budget. Only two other states in the nation are governed similarly, but, in both cases, one “super board” oversees all of higher education. In Kentucky, each university has its own governing board. Newberry observes that the current national trend is toward merging technical centers and community colleges under a higher education umbrella. An alternative structure would be that of an independent system of community colleges merged with technical centers.

WRITING FOR THE EDUCATION COMMISSION ON THE STATES, McGuinness suggests the following guidelines for policymakers considering reorganization of educational systems:

- *Before reorganizing, clarify the state vision, goals and objectives for higher education. Recognize reorganization as a means to an end rather than an end in itself.*
- *Be explicit about the specific problems that were the catalysts for the reorganization proposals.*
- *Ask if reorganization is the only or the most effective means for addressing the problems that have been identified. Have the costs of reorganization been weighed against the short- and long-term benefits?*
- *Recognize that a good system takes into consideration both state and societal needs and the needs of colleges and universities, but recognizes that state interests are not necessarily the same as the sum of institutional interests.*
- *Distinguish between state coordination and institutional governance.*
- *Examine the total policy structure and process, including the roles of the governor and agencies of the executive branch and the leg-*

¹⁴⁷ Newberry.

¹⁴⁸ Hines, E. (1995, August). Telephone interview.

*islature, rather than focusing exclusively on the formal higher education structure.*¹⁴⁹

In short, do not move with haste. Instead, precisely define present problems and needs, as well as the overriding purpose of reorganization, and consider the potential cost, in terms of time and institutional effectiveness, that organizational change will exact. Restructuring can take as long as five to eight years to function effectively,¹⁵⁰ a lapse in institutional capacity that Kentucky cannot afford, given the education gap it must close.

As a necessary prerequisite to any system merger or reorganization, comprehensive data about the present client base of institutions, unmet client need, and programmatic effectiveness must be developed, analyzed and utilized to refine missions, restructure programs, and measure institutional performance. In 1993, the Governor's Commission on Quality and Efficiency recommended that a comprehensive public audit of the quality of state-operated workforce training and education programs¹⁵¹ be performed. Such an audit would permit a more informed decisionmaking process. A precise time frame for its completion and policy and program responses to its findings should be established.

Again, the ideal post-secondary system of education and training would successfully accommodate and blend the vocational and the academic approach. Indeed, it would constantly develop new approaches to education that would bring more people into our institutions. By ensuring alternative routes

As an alternative to potentially disruptive, statewide institutional reorganization, policymakers should consider creating a package of financial incentives or rewards for collaboration.

to education, we can address individual needs while meeting uniform standards. Clearly, expectations of all post-secondary students must be elevated, but we cannot afford to drive out educational approaches that may be effectively meeting the needs of an

undereducated population or a population that responds more positively to a vocational model of training and education.

As an alternative to potentially disruptive, statewide institutional reorganization, policymakers should consider creating a package of financial incentives or rewards for collaboration. Such an approach may, over the long term, facilitate the realization of a merged system, driven by local initiative,

¹⁴⁹ McGuinness Jr., 1994, 39.

¹⁵⁰ Ibid., 39.

¹⁵¹ GCQE, 82.

rather than legislative mandate. Diverse approaches to and methods of educating, however, should be preserved and expanded to bring more Kentuckians into the educational process.







The highly collaborative Bell County Campus of Southeast Community College and Southeast Regional Tech System is a model worthy of broad replication across the state. While physical location will prohibit joint campuses in many, if not most cases, nothing precludes collaborative institutional agreements between tech schools and community colleges or state-supported universities. Precise criteria should be established and utilized to evaluate performance and determine funding rewards. Possible criteria include:

- jointly developed degree programs and curricula;
- shared administrative roles and costs;
- shared faculty and staff;
- shared equipment costs; and,
- shared services and facilities, whenever possible.

Rather than move precipitously to merge the community colleges and Kentucky Tech or sever the community colleges from the University of Kentucky, a judicious approach should be adopted. Rather than seek recommendations from a task force of individuals with political and institutional loyalties, policymakers should seek an independent evaluation of the current organizational structure from a panel of recognized national experts and be prepared to act on that panel's consensus recommendations. Through an independent, expert evaluation of the current organizational structure, policymakers can secure thoughtful recommendations that are divorced from political and institutional rivalries. Again, the overriding vision of an efficient and effective workforce development system that provides optimum opportunity and quality should drive decisionmaking.

Policymakers should consider another series of actions. They include establishment of comprehensive

POLICY OPTIONS

-  Shape institutional visions and programs that respond to client needs and preserve alternative approaches to education, revising them as needed
-  Develop financial incentives, rewards to encourage collaboration *or* merger at the local level of community colleges and Kentucky Tech Centers
-  Mandate system-wide articulation agreements
-  Conduct an independent quality audit of the full workforce development system
-  Consider mandating more precise institutional roles to compel cooperation and prevent duplication of services
-  Appoint a nationally recognized panel of experts to assess and recommend an organizational structure for Kentucky's workforce development system

sive standards for measuring competency and crediting it appropriately and mandated articulation agreements within a prescribed time frame between the various publicly supported systems. Additionally, policymakers may wish to more precisely define institutional roles to end costly, counter-productive institutional rivalries and possible duplication of services. In short, policymakers should continue to demonstrate minimal patience with divisiveness and institutional rivalry. Instead, recognition and financial reward should be reserved for those institutions which move quickly to pave a seamless path to education and training opportunities of uniform quality for citizens of diverse capabilities.

Leveraging Higher Performance from Higher Education

It is a commonplace observation that all organizations, over time, tend more and more to be run for the people who work in them, and for the convenience and reward of their managers and professionals . . . To whatever extent a university may be inward-looking, its departments and disciplines peer-focused and self-referential, the “customer” questions posed by the quality movement have a healthy air to them.

Ted Marchese
Vice President
American Association for Higher Education

WHILE SIGNIFICANT PRESSURE exists within the state to increase general fund appropriations for higher education, it is being moderated by reciprocal pressure for greater fiscal accountability. The escalating cost of the increasingly important credentials higher education provides has raised the ire of Baby Boom generation parents who fear diminishing returns for their children. At the same time, workers and enterprises have expressed impatience with higher education’s lagging response to changing needs. In response, policymakers in Kentucky are seeking appropriate points of leverage that will effect necessary and appropriate change.

And, in spite of institutional resistance to what M.M. Chambers referred to a quarter of a century ago as “the smothering officiousness of the state house,”¹⁵² members of the higher education community have begun to respond to calls for greater

fiscal accountability, to openly discuss ways of achieving the unthinkable—higher quality at lower prices. As Alan E. Guskin, a private college administrator, observes in

“The cumulative message should be clear, even to the most skeptical: we must indeed figure out creative ways to reduce institutional expenses, and then to reduce student costs.”

an essay in *Change*, a publication of the American Association of Higher Education, “The cumulative message should be clear, even to the most skeptical: we must indeed figure out creative ways to reduce institutional expenses, and then to reduce student costs.”¹⁵³ In addition to lowering costs, Guskin suggests, colleges and universities must improve student outcomes

¹⁵² Chambers, 8.

¹⁵³ Guskin, A.E. (1994, August). The university challenge of the 1990s. *Change*, 26:23.

and utilize information technology more fully in the education process,¹⁵⁴ a step that many believe will reduce institutional costs over the long run.

The response of university and college administrators is somewhat belated. State houses around the nation have been cutting higher education a smaller and smaller piece of the public pie since the early 1980s.¹⁵⁵ The ivory tower is under siege largely because fiscal accountability has become a public sector imperative, and no area of state spending is being excluded from scrutiny. But excesses by university administrators, expensive research projects devoid of apparent public benefit, low faculty productivity, generous pensions, and career students have also garnered the attention of policymakers.¹⁵⁶

They have responded by flexing their legislative muscle in previously sacrosanct areas. In Ohio, for example, the legislature has compelled professors to spend 10 percent more time teaching undergraduates.¹⁵⁷ Several states have acted to move students through undergraduate programs at a faster pace. Arizona has opted to reduce the number of credit hours required for graduation. Performance standards are also being discussed or implemented in a number of states, including Kentucky, but, as Charles Mahtesian concludes in *Governing*, “. . . most states have lacked the political will or desire to link performance directly to dollars.”¹⁵⁸ Instead, performance standards are linked to relatively small percentages of funds.

Kentucky is no exception. While performance standards have been developed and are now being utilized by the Council on Higher Education, they are linked to a small pool of dollars. And base allocations are not subject to performance evaluation, according to Ken Walker, Deputy Executive Director of Finance for the Council on Higher Education. An anticipated \$3.3 million in performance funds, less than 1 percent of the \$733.6 million expected to be allocated to higher education for the first year of the 1996-1997 biennium, is expected to be distributed this year.

Money, however, may not be the issue. Regardless of the amount of money tied to performance, observes Walker, no institution wants to be perceived as having failed to measure up to standards. Consequently, even modest amounts of funds take on importance. Without more substantial incentives and disincentives, performance funding mechanisms, however, may not spur the kind of dramatic change higher education must undergo in order to reduce costs, bring vigorous attention to improving student out-

¹⁵⁴ Ibid.

¹⁵⁵ Mahtesian, C. (1995, July). Higher ed: the no-longer-sacred cow. *Governing*, 8:26.

¹⁵⁶ Ibid., 20-26.

¹⁵⁷ Ibid., 20.

¹⁵⁸ Ibid., 26.

comes, create more responsive programs, and improve access through more extensive use of technology. Higher education's collective problems, Guskin observes, are increasingly being likened to those of another costly and unresponsive U.S. system.

People are beginning to make comparisons between the economics of higher education and of the health care system . . . costs that rise relentlessly; the unwillingness of providers to deal directly with the core delivery system; governance structures that rest decisionmaking power about costs in the hands of professionals whose personal interests are compromised by reducing costs; belief systems that increases in quality always require increases in expenditures; and a decentralized system that is heavily underwritten by federal dollars.

NATIONALLY, AS IN KENTUCKY, state funds dedicated to higher education have gradually been crowded out by an expanding menu of public obligations. California, for example, now dedicates more revenue to corrections than to higher education,¹⁵⁹ a shift in resources that may be a harbinger of things to come in every state. In Kentucky, spending per full-time higher education student has fallen more sharply than in any southern state, 17 percent over the most recent decade.¹⁶⁰ During the 1990s alone, Kentucky's universities absorbed \$85 million in cuts, according to Walker.

As a consequence of declining state contributions, students and their parents are shouldering more of the cost of running public institutions of higher education. Nationally, the cost of tuition has risen by more than 86 percent after adjustment for inflation since 1980.¹⁶¹ Student debt has, in turn, expanded. A 1994 study by Sutterlin and Kominski found that more than half (51 percent) of the nation's 1990-1991 post-secondary students received financial aid from at least one source and that the average aid package for the year stood at almost \$3,000 per student.¹⁶²

In Kentucky, tuition nearly tripled at doctoral universities between 1983 and 1994. Because enrollment has continued to rise steadily even as tuition has risen, higher education officials suggest that the escalating cost of tuition does not appear to be adversely affecting access. However, simple economics would suggest that such increases do affect access to the much-needed educational resources of institutions of higher education, particularly in a state

¹⁵⁹ Butterfield, A12.

¹⁶⁰ Muhs (September 7, 1995), B1.

¹⁶¹ Farrell, C. (1996, March 18). The new math of higher education. *Business Week*. 39.

¹⁶² Sutterlin and Kominski, 7.

where per capita income lags so far behind the national average. Indeed, the question of access is not one of enrollment, but one of how many Kentuckians do not enroll or do not persist in college due to the prohibitive cost. These questions and others related to the impact of increasing costs on access to state supported universities and community colleges should be explored in depth.

In California, Michael A. Shires concludes in a 1995 RAND study of the state's Master Plan for higher education, which establishes the goal of providing access to all who stand to benefit from higher education, that the state is experiencing "*an access crisis*."¹⁶³ Shires finds that "the rising levels of fees in the state are routinely pricing out students who . . . should be served by the state's higher education sector. Unless the price of higher education is reduced to earlier levels, the state will guarantee that a significant proportion of students will be denied access to the state's public undergraduate institutions."¹⁶⁴

Clearly, access to higher education is unique to the supply and demand factors that influence the institutions of individual states. California, in spite of the economic downturn it has experienced in recent years, faces the prospects of an exploding population and inadequate institutional capacity to meet its likely demand for higher education in the coming years. Our future circumstances are likely to be quite different, given recent demographic trends, flattening enrollments at public institutions, and what many view as institutional capacity that already exceeds demand at some institutions. Consequently, an examination of current trends and future projections of demand for higher education and institutional capacity to meet it should be undertaken. The role increased tuition costs may play in limiting demand or access should be explored simultaneously. Only through scientifically established, periodically revised analyses of such factors can we effectively shape institutional missions, channel resources appropriately, and assess the real impact of the status quo—rising costs to students and citizens.

WHILE INCREASED STATE CONTRIBUTIONS to higher education, which are expected to rise 4 percent here over the first year of the coming biennium and possibly more the following year, may help moderate the rising cost of tuition to students, they will do little to effect much-needed organizational change. Across the nation, "customers" of higher education, as well as many would-be nontraditional students, are beginning to demand more value

¹⁶³ Shires, M.A. (1995, January). *The Master Plan Revisited (Again): Prospects for Providing Access to Public Undergraduate Education in California* (draft). Santa Monica, CA: RAND, xv.

¹⁶⁴ *Ibid.*, 57.

for their higher education dollar, as well as new products. They are dismayed not only by rising costs but also by lagging institutional responsiveness to changing public need. A recent national survey conducted by Washington State University with support from the University of Kentucky found that a significant majority of Americans are fully aware of their ongoing need for education and retraining—81 percent of respondents recognize that their success at work is tied to their education.¹⁶⁵ What they do not find is available, accessible opportunities to meet their needs.

In short, the institutions which have traditionally provided post-secondary education have not responded to the growing demand for greater flexibility, in spite of a rapid influx of non-traditional students. Many who work full-time want opportunities for skills enhancement through courses of study that accommodate their workdays, their busy schedules, and their need to compress learning modules into

Many who work full-time want opportunities for skills enhancement through courses of study that accommodate their workdays, their busy schedules, and their need to compress learning modules into shorter periods of time.

shorter periods of time. In order to become more responsive to this growing client base, both technical and higher education institutions are under pressure to schedule courses at night, compress courses of study, and increase distance learning opportunities. The survey authors conclude, “Teaching conducted in the traditional campus classroom will not meet the public’s demand for tailored educational services.”¹⁶⁶

Higher education in Kentucky, as well as around the nation, is being challenged to change, to restructure its delivery of an increasingly important product—education—and, in doing so, to achieve the same efficiencies that globalization has demanded of virtually all institutions. Today, rising numbers of part-time and intermittent learners are potential customers of higher education. Without products that meet their needs, some predict that the demands of this growing customer base will eventually be accommodated by the private sector. University of Pennsylvania researchers Robert Zemsky and Penney Oedel offer the following “pessimistic” scenario:

Given that the demand for skills training and vocational learning would likely remain unsatisfied, the inevitable result would be an all-

¹⁶⁵ Dillman et al., 3.

¹⁶⁶ Ibid., i.

*out assault on higher education's credential monopoly. In such a regulatory battle, a recalcitrant and diminished higher education would not likely win.*¹⁶⁷

In Kentucky, that “assault” has already begun in the form of proposed legislation to enable Kentucky Tech schools to confer technical degrees.

On the other hand, Zemsky and Oedel suggest that colleges and universities could rise to the challenge and

*“become more like other American enterprises—seeking out new markets, developing new products, and satisfying the new demand for technical skills and work-connected learning. This vision maintains that higher education will do for the rising class of technical craftsmen what it has so often done for new vocations in the past—convey status and standing by providing new credentials and degrees.”*¹⁶⁸

Zemsky and Oedel cite efforts by Indiana University officials to identify obstacles to sustained enrollment of “new majority” students, active members of the workforce, 80 percent of whom left after having taken only one or two courses.¹⁶⁹ Preliminary findings indicate that the extensive foundation of courses required exacts such an extensive investment of time that working students are stymied and find it difficult to see a link between education and work.

*What the IU analysis seems to be saying is that new products cannot be cast in old molds: meeting the demand for job-connected education means reconfiguring many of higher education's traditional offerings. Such a transformation cannot be undertaken lightly. In the end, each institution will have to establish its own sense of balance, finding the equilibrium between traditional education and job-connected training, between the needs of rite-of-passage students and the demands of intermittent adult learners.*¹⁷⁰

Ultimately, both public and private institutions of higher education must confront the challenge of lowering the cost of their product, and they must do so in an era of new demands for quality and service, evaporating state and

¹⁶⁷ Zemsky, R. and Oedel, P. (1994). Higher education and the changing nature of the American workforce—responses, challenges and opportunities. *EQW Working Papers*, Institute for Research on Higher Education, University of Pennsylvania, 13.

¹⁶⁸ Zemsky and Oedel (1994), 13.

¹⁶⁹ *Ibid.*, 11-12.

¹⁷⁰ *Ibid.*, 12.

federal support, and rising expenses. Though formidable, enterprises throughout our society have faced a similar challenge in the face of globalization and technological advancement. Because the pressure for change is likely to escalate rather than abate, higher education, particularly publicly supported institutions, ultimately must engage in systemic, organizational change. We may be “years away from knowing what academic versions of TQM will appropriately look like,” as Marchese suggested in 1993, but the urgency that propelled private sector reorganization appears to have arrived for higher education.

In Kentucky, anticipated gains for higher education in the coming bien-nium will not close lost fiscal ground and enable broad benefits to students. And the future is unlikely to yield significant increases in public outlays. In an exploration of the impact of larger trends on the state’s budget, reported in *\$5.8 Billion and Change*, the Kentucky Long-Term Policy Research Center finds that in order to maintain the *present* quality of state programs, expen-

ditures will exceed reve-
nues within a few short
years, resulting in a
structural deficit.¹⁷¹
Consequently, it is un-
likely that Kentucky will
be able to achieve im-
provements in higher

*Arguably, adoption of the ethic of
continuous improvement—discovering and
implementing best practice in management
and instruction—alone would dramatically
alter the higher education culture.*

education or any other spending area, for that matter, through increased ex-penditures. Instead, it will be necessary to change the conduct of governance, to enter into an era of fiscal reform and organizational change.

The core values of organizational change, which have emerged principally from private sector experiences, offer a solid ideological foundation on which institutionally unique processes can be developed. Arguably, adoption of the ethic of continuous improvement—discovering and implementing best practice in management and instruction—alone would dramatically alter the higher education culture. Equally important, however, are the critical goals of reorienting higher education institutions toward their “customers”—students, enterprises, and the public in general—and tapping the full potential of criti-cal human resources, of faculty and staff who, given the authority to do so, can help shape a more responsive, more efficient system of management and instruction. As Miles observes, knowledge of the strengths and weaknesses of individual departments is far more likely to reside with faculty, rather than

¹⁷¹ Schirmer et al.

members of the administration.¹⁷² The ideal outcome of change processes driven by empowered employees, Marchese suggests, is “to remake organizations so they become more focused, disciplined, quick-footed, humane, and competitive.”¹⁷³

While performance standards help provide an important coordinating role, giving focus to the overriding goals of public institutions, they may be insufficient to motivate timely attention to needed systemic, organizational change. Some, like RAND researchers Benjamin, Carroll, Jacobi, Krop and Shires, conclude that the challenge of organizational change is one to which higher education brings little or no experience.

*The existing governance system in higher education, designed to manage growth, cannot effectively cope with the problem of reallocating resources. It cannot meet the challenges of the rapidly changing environment. The central issue is how to design improved governance tools that will allow decisionmakers to more effectively reallocate resources from low to high priorities and focus missions within and among higher education institutions.*¹⁷⁴

Again, the changing context, which includes unrelenting fiscal pressure may provide sufficient impetus for reform, if enabled by a redesigned institutional governance structure. “Externally developed solutions,” such as state performance standards, the authors observe, have historically proven futile.¹⁷⁵ Instead, the authors recommend organizational change from within that will enable universities to reckon with difficult choices and achieve more positive institutional outcomes. As ground rules, they suggest the following guidelines:

- set priorities based upon objective evaluation criteria;
- obtain objective quantitative and qualitative information for comparison;
- establish university- or institution-wide goals that supersede private or individual interests; and,
- enable broad engagement in a decisionmaking process to facilitate priority setting, process ownership and action.¹⁷⁶

¹⁷² Miles, J. (1994, September). A modest proposal for saving university research from the budget butcher. California Higher Education Policy Center, Los Angeles, CA.

¹⁷³ Marchese, T. (1993, May-June). TQM: a time for ideas. *Change*, 25:10.

¹⁷⁴ Benjamin, R., Carroll, S., Jacobi, M., Krop, C., and Shires, M. (1993). *The Redesign of Governance in Higher Education*. Santa Monica, CA: RAND Corporation, 2.

¹⁷⁵ *Ibid.*, 36.

¹⁷⁶ *Ibid.*, 37-45.

“If the process is well designed, and if participants help design it and participate under rules developed through wide consultation among all levels of decisionmaking, the institution may well accept the results.”¹⁷⁷

While hardly an optimistic assessment of the potential for organizational change in the higher education community, Benjamin and his colleagues clearly believe needed change must emanate from within. The obstacles to such change, the Pew Higher Education Research Program concludes, are numerous. They include:

- the sense that colleges and universities are “not like other enterprises and hence should be exempt from the restructuring that is reshaping how America does business”;
- fragmentation—a loss of focus and internal coherence; and,
- the nature of institutional leadership: faculty for whom institutional vision is too often occluded by other demands, administrators who are ill-prepared “for the business of making their institutions different,” and presidents who are subject to the whims of state policy-makers.¹⁷⁸

In spite of these formidable obstacles, Pew researchers conclude that the time for colleges and universities to engage in structural change has come. “To ignore this challenge—to believe that societal forces will continue to defer to higher education’s traditional modes and procedures—is almost certain to accelerate the process by which traditional colleges and universities lose their dominance as the purveyors of post-secondary education.”¹⁷⁹ To facilitate change, to check institutional costs that have grown rapidly “without a corresponding gain in either quality or productivity,”¹⁸⁰ and to reckon with difficult questions such as faculty work and “the ideal shape and size of an institution,”¹⁸¹ Pew researchers offer a series of institutional recommendations. Reminiscent of observations from the RAND researchers, they include:

- engage faculty and the entire campus community in the realization of institutional goals;
- simplify curriculum in order to restore focus;
- redeploy full-time faculty to core courses to improve instruction and student outcomes;

¹⁷⁷ Ibid., 44.

¹⁷⁸ Zemsky, R., editor. (1993, February). A call to meeting. *Perspectives*, The Pew Higher Education Research Program, Philadelphia, PA, 4:2A-3A.

¹⁷⁹ Ibid., 5A.

¹⁸⁰ Ibid., 3A.

¹⁸¹ Ibid., 5A.

- plan for “purposefully smaller” institutions; outsource selected operations to streamline operations;
- create departmental cost centers with outcome-based budgeting; and,
- “withhold the heavy hand.”¹⁸²

The latter recommendation is directed at frustrated policymakers, about whose role in restructuring higher education Pew researchers observe:

*While legislatures are certainly within the bounds of reason to demand greater efficiencies of public institutions, attempts to take direct control of the finances and governance of an institution are certain to do more damage than good. State governing bodies should provide public institutions a reasonable time frame of, say, five years to bring about necessary reforms in their own terms.*¹⁸³

Pew researchers suggest that, within a five- to seven-year time frame, strong leadership and comprehensive retraining of current staff could yield a 25 percent reduction in the number of full-time employees an institution requires. “To engage in restructuring is to transform colleges and universities into something other than engines of employment—to make them more effective organizations with a clearer sense of mission, product, and service.”¹⁸⁴

As Shires observes, however, restructuring should not be entered into simply for the sake of restructuring. Instead, he suggests, its focus should be on “mission and innovation within the institutional context.”¹⁸⁵ Indeed, as the following discussion of high-performance organization in the private sector acknowledges, the artifice of change, surface rather than substance, sometimes results from mandates. Consequently, the measurement of outcomes is key to determining whether organizational change initiatives are indeed giving rise to innovation in such key areas as cost reduction, the application of technology, and improved quality of instruction and student outcomes. Indeed, fully documenting the process and the impact of change initiatives within our higher education institutions will be of critical importance in years to come as we seek transferable ideas that can improve systems across the state.

In spite of reservations about the efficacy of external pressure for change, private sector experiences often illustrate the positive role it can play in organizational change. External pressure, namely declining market shares and increased competition, is frequently cited as the impetus for change initia-

¹⁸² Ibid., 8A.

¹⁸³ Ibid., 8A-9A.

¹⁸⁴ Ibid., 7A.

¹⁸⁵ Shires, 60.

tives that have reshaped and redefined organizations. These experiences offer useful lessons to both policymakers and university leaders, a community which clearly must expand to include faculty and staff.

Today, higher education is well into an era of declining resources, but because rising tuition rates have enabled many institutions to forestall structural change, the current situation still falls short of a fiscal crisis in most states. In the absence of systemic change, however, many observers believe higher education could lose its dominant position as post-secondary educator in our society. Moreover, genuine fiscal crisis appears to be an inevitability. Consequently, higher education faces the choice of undergoing change now in anticipation of almost certain future outcomes or postponing the inevitable and risking loss of status. Clearly, the preferred scenario is for institutions of higher education to act now in the long-term interest of preserving and improving this vital service to the state and the nation.

*F*OR STATE POLICYMAKERS, the central questions around higher education are those of how much external pressure will be required to spur systemic, organizational change within the higher education community, and what, if anything, policymakers can do to leverage it sooner as opposed to later. Because higher education consumes almost 15 percent of state government expenditures, nearly \$700 million in 1994 alone, the quality of this irreplaceable public service and the impact of spiraling costs to citizens and students are wholly legitimate concerns of policymakers. The core lessons of organizational change, however, must not be lost to policymakers in the process. Fort Lewis College professor Roger Peters observes in *Change*, "As legislators micromanage higher education in the name of 'efficiency' and 'productivity,' businesspeople are moving in exactly the opposite direction: toward decentralized control, autonomy for those closest to the customer, and toward intuitive, holistic modes of assessment."¹⁸⁶

While performance goals may appear to be a shift toward centralized control, they may offer the external pressure that typically spurs organizational change. They issue, if you will, from the stockholders—the taxpayers. The standards to which institutions are being held in Kentucky, however, have been developed with a significant degree of institutional autonomy. While a core of high-value areas must be addressed by all institutions, the indicators of performance in these areas are developed by the respective institutions, subject to approval by the Council on Higher Education. The core standards are: educational outcomes, attainment through access, equal opportunity, and



¹⁸⁶ Peters, R. (1994, November-December). Accountability and the end of higher education. *Change*, 26:16.

support for primary and secondary education goals. For the community colleges, workforce development is a core value.

While important, these standards alone will not leverage much-needed organizational change. In order to address the fundamental issues higher education confronts, state policymakers should strongly consider linking performance standards to *substantial financial incentives and disincentives* and including the following standards in the present high-value core:

- advancement of inclusive, participatory institutional processes to shape organizational change within a prescribed time period;
- reductions in tuition realized through organizational change, cost containment, staff reduction, resource reallocation, and/or new marketing strategies;
- creative, holistic measures of student outcomes;
- systematic integration of technology into the educational process to expand access and reduce costs; and,
- vigorous attention to the needs of working-age Kentuckians, demonstrated in flexible, accessible, timely and relevant courses of study that enable and encourage broad participation.

POLICY OPTIONS

-  Conduct a study of institutional supply and demand to determine where, when and if access is being limited and where resources will be most needed
-  Link higher education performance standards to substantial financial incentives and disincentives designed to advance:
 - ⇒ organizational change
 - ⇒ reductions in costs to students and taxpayers
 - ⇒ improved student outcomes
 - ⇒ full integration of technology into learning systems
 - ⇒ expanded and more flexible learning opportunities for working-age Kentuckians

Broad-based institutional commitment to organizational change arguably offers the only viable route to more responsive and more accessible system of universities and community colleges. It should be encouraged and rewarded in the long-range interest of citizens of the Commonwealth. Likewise, the failure to engage in such processes during a prescribed period of time, to reckon forcefully with change, with the issues of cost, quality and access, should be met with declining allocations.

The Imperative of Organizational Change

America's choice is between . . . a strategy that requires high skills and delivers a high standard of living—or the alternative strategy that sets the target of low costs and low wages and gradually forces down the standard of living of average Americans to Third World levels, a strategy still pursued in many American companies.

Hedrick Smith

BECAUSE GLOBALIZATION has dramatically altered the competitive context, old organizational structures that shape the management of resources, particularly human resources, no longer serve firms well. Indeed, they no longer serve government well. In the private and public sectors, they are poor matches for today's demanding marketplace. Many firms and, to a lesser extent, governments have responded with dramatic organizational change, creating more open, democratic workplace processes in order to tap the advantage of "the application of knowledge."¹⁸⁷

The need to shift to this new workplace order underscores the importance of ensuring a solid foundation of basic or critical thinking skills that will enable continuous learning and higher levels of participation, productivity, and profitability. At the same time, it reinforces our conclusions here about the need to bring critical focus to our workforce development initiatives. If we hope to cultivate opportunities for higher earnings in the Commonwealth, the cultivation of high-performance workplaces must become a primary goal. In the absence of attention to the demand side of the training and education equation, public investment in workforce development will be far less likely to yield returns.

Research offers powerful evidence that private sector organizational change is in the public interest. It enables higher levels of productivity and product quality that improve competitiveness and increase the likelihood of a firm's survival, improves the quality of work life and imparts important community-building skills. Because organizational change is now so closely linked to the capacity of firms to compete in the global marketplace, many argue that, in its absence, public investment in workplace training will not likely yield dividends. Consequently, the advancement of organizational change or high-performance organizations is becoming a central public strategy for workforce development.

¹⁸⁷ Drucker, 64.

In spite of its many documented benefits, only about one-third of U.S. firms have adopted the innovative human resource practices that are central to organizational change.¹⁸⁸ While such factors as technological innovation and inventory management are key to competitiveness in today's economy, human resource practices lie at the heart of real organizational change, which fundamentally alters the culture of a workplace. Broadly, organizational change involves movement from a rigid hierarchical management structure to one that emphasizes, among other things, learning, employee empowerment, involvement and engagement, customer satisfaction, and continuous improvement in both process and product. The outcome is what is commonly referred to as high-performance organization, one in which all parties, from

14 Points for Management

W. Edwards Deming, 1990

- ⇒ *Create and publish to all employees a statement of the aims and purposes of the company or organization. Management must demonstrate constantly their commitment to this statement.*
- ⇒ *Learn the new philosophy—top management and everybody.*
- ⇒ *Understand the purpose of inspection—for improvement of processes and reduction of cost.*
- ⇒ *End the practice of awarding business on the basis of price tag alone.*
- ⇒ *Improve constantly and forever the system of production and service.*
- ⇒ *Institute training.*
- ⇒ *Teach and institute leadership.*
- ⇒ *Drive out fear. Create trust. Create a climate for innovation.*
- ⇒ *Optimize toward the aims and purposes of the company the efforts of teams, groups, staff areas.*
- ⇒ *Eliminate exhortations for the workforce.*
- ⇒ *Eliminate numerical quotas for production. Instead, learn the capabilities of processes and how to improve them.*
- ⇒ *Remove barriers that rob people of pride of workmanship.*
- ⇒ *Encourage education and self-improvement for everyone.*
- ⇒ *Take action to accomplish the transformation.*

Source: *State Trends & Forecasts*, Council of State Governments, October 1994

top management to frontline employees, are actively engaged in its improvement.

For many, organizational change is synonymous with Total Quality Management (TQM), an emphasis on process—how an organization works—championed by the late W. Edwards Deming. An American with decidedly un-American theories about management, Deming is widely credited with having played a pivotal role in Japan's rise from post-World War II ruin to a position of undisputed leadership in the world marketplace. Importantly, Deming's principles, which have influenced organizational change initiatives around the world,

strongly emphasize continuous improvement through training and institutional support for education and self-improvement.

From a policymaking standpoint, the cultivation of high-performance organizations offers a substantial payoff. First and foremost, high-performance organizations are far more likely to invest in training and education. As

¹⁸⁸ Kochan and Osterman. (1994). *The Mutual Gains Enterprise*. Boston: Harvard Business School Press, 107.

Deming's principals illustrate, increasing the capabilities of workers is essential to expanded participation and higher performance. In turn, abundant evidence suggests that investments in human resource development enhance productivity, efficiency, and bottom-line profitability, which ultimately determines whether firms will continue contributing to social and economic progress over the long-term.

As illustrated, the high-performance organization bears little resemblance to the traditional hierarchical, autocratic or low-performance workplace. Instead, the high-performance workplace generates increased productivity through broad investment in worker education and training, new technology, and, importantly, a fundamental restructuring of the relationship between frontline workers and managers. The low-performance model, on the other hand, seeks to lower production costs through low-skill, low-wage strategies that are generally synonymous with low productivity. States like Kentucky which have no policies or programs to encourage the reorganization of workplaces may be indirectly encouraging expansion of the low-performance model.

WORKPLACE ORGANIZATION

has become a critical factor because it determines whether the ideas of workers contribute to product and production innovation—a key to success in the global marketplace. Firms that are organized not only to accept, but systematically act upon, the ideas of employees, are far more likely to encourage further contributions and innovations, to improve production processes and product quality, increase worker productivity and customer satisfaction, and enjoy increased profitability. A study of 14 northwest England manufacturing firms of varying size, for example, found that each linked innovation with commercial success. Proponents conclude

TABLE 4
Characteristics of
High- and Low-Performance
Organizations

High Performance	Low-Performance
Empowering; decision making diffused; high autonomy	Controlling; chain of command; low autonomy
Teams; cross-functional networks; frequently self-managed	Specialized/functional departments; directed by managers
Supportive corporate culture; adaptable to change	Rigid; bureaucracy avoids change
Flat/participative structure	Tall/autocratic
Pay-for-knowledge	Seniority-based pay
Knowledge-intensive	Labor-intensive
Broad sharing of information about the organization	Information held by management
Cross-functional; broad employee skills; job rotation; multiple responsibilities	Specialized; narrow employee skills
Social/technical integration; training for both	Technical system dominance
Market-driven innovation; research & development emphasized	Technology-driven innovation
Diverse; varied products & services	Narrow/uniform products & services
Multiple application of technology	Single application of technology

Source: Kentucky Science and Technology Council, 1994

that a firm can be strong over the short term without innovative change, but not over the long term. High-performance organization dramatically expands the potential for innovation.

The benefits of high-performance have proven to be so significant that the Kentucky Science and Technology Council recommended in a 1994 report that Kentucky pursue a comprehensive high-performance strategy that would transform its workforce, private enterprises and public agencies.¹⁸⁹ Today, 26 state governments are pursuing TQM strategies internally in an effort to cut government costs and create greater efficiencies. Arizona estimates that its TQM efforts have yielded \$43 million in savings in just two years.¹⁹⁰

While research shows that U.S. firms have begun to move toward high-performance strategies, the majority remain mired in low-performance organizational structures.

Indeed, many firms “talk the talk” but do not “walk the walk,” that is, they espouse commitment to but do not make difficult but fundamental cultural change.

Massachusetts Institute of Technology Professors Thomas A. Kochan and Paul Osterman conclude that about one-third of American workplaces have adopted two or more high-

performance human resource innovations, “but not all firms that adopt these innovations are apt to sustain them over time.”¹⁹¹ Indeed, many firms “talk the talk” but do not “walk the walk,” that is, they espouse commitment to but do not make difficult but fundamental cultural change. Significantly, those firms most likely to undergo organizational change, Kochan and Osterman found, are exposed to international competition,¹⁹² the context which ultimately will affect virtually every American enterprise.

Eileen Appelbaum and Rosemary Batt of the Economic Policy Institute observe, “Substantial evidence now exists that American firms can no longer remain competitive by organizing along traditional mass production lines—using a work process based on the separation of conception and execution, the detailed division of labor into fragmented tasks, the routinization of work, and the use of equipment dedicated to the production of standardized products.”¹⁹³ Because developing countries have an advantage over U.S. firms in standardized, low-quality products, U.S. firms must move away from this segment of the market and begin to concentrate on higher quality

¹⁸⁹ Daly et al., 30-36.

¹⁹⁰ Council of State Governments. (1995, February/March). TQM rings cash registers for states. *State Trends Bulletin*, 1:2.

¹⁹¹ Kochan and Osterman, 108.

¹⁹² *Ibid.*, 107.

¹⁹³ Appelbaum, E. and Batt, R. (1993). *High-Performance Work Systems: American Models of Workplace Transformation*. Washington, DC: Economic Policy Institute, 5.

segment of the market and begin to concentrate on higher quality products that precisely fit customer demand.

The broad lesson to be gleaned from research is that a company's workers are its most versatile and valuable resource, but the company must organize accordingly to capture the full advantage of these resources. A recent U.S. Department of Labor study underscores the importance of changing work organizations as quickly as possible to capture the full potential of the nation's workforce and become more competitive in the international marketplace. The study concludes that those organizations which implement high-performance practices early will be able to reap greater financial rewards than those which adopt these practices later. Late entrants may only achieve competitive parity while those organizations which make no effort to be competitive will be at a significant disadvantage. Consequently, the public and private sectors must recognize that the organization of enterprises has become essential to success and even survival.

WHILE HIGH-PERFORMANCE work organization has become somewhat fashionable, it is far more than a passing fad. An expanding body of empirical evidence, including case studies from an array of firms that have implemented these practices, attests to myriad benefits. Businesses have not instituted elements of high performance organization out of charity, but rather out of a presumed and well-documented relationship to increased productivity and profitability.¹⁹⁴ In addition to production methods, the human resource practices employers adopt and institutionalize—the way they treat employees—have everything to do with the bottom line.

The International Assembly Plant Study sponsored by MIT, for example, examined 90 automotive assembly plants representing 24 producers in 16 countries—60 percent of worldwide assembly plant capacity. Based on an analysis of the data collected, Wharton School Professor John Paul MacDuffie concludes that flexible production systems that mesh “bundles” or systems of human resource practices with overall production/business strategy outperform plants using traditional mass production systems in both productivity and quality.”¹⁹⁵ The results, MacDuffie concluded, establish strong statistical evidence of “a positive relationship between human resource practices and economic performance.”¹⁹⁶

¹⁹⁴ Lawler III, E.E., Mohrman, S.A., and Ledford G.A. (1992). *Employee involvement and total quality management: practices and results in Fortune 1000 companies*. San Francisco: Jossey-Bass.

¹⁹⁵ McDuffie, J.P. (1995). Human resource bundles and manufacturing performance: organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review*, 48:218.

¹⁹⁶ *Ibid.*, 218.

Firms that have made sustained investments in high-performance organization report dramatic returns. For example, Motorola, which is widely recognized as one of the nation's most advanced high-performance corporate organizations, estimates that it receives a \$30 return for every \$1 it invests in workforce training. Edy's Grand Ice Cream found that a new employee management system helped reduce inventory 66 percent, increase productivity 57 percent, and boost sales volume 830 percent. Working cooperatively with the union representing its employees, Xerox has reduced manufacturing costs by 30 percent and decreased by 50 percent the time needed for developing new products.¹⁹⁷

A review of literature, conducted for the U.S. Department of Labor, on the relationship between high performance organizational strategies and profitability, points to numerous business successes that are grounded in human resource changes and investment. Based upon their review, the

“Corporate cultures that tend to put their three constituencies—shareholders, customers, and employees—on the same plane, as opposed to putting shareholders first, are perversely the ones that do best for shareholders.”

authors conclude that “the evidence for employee development practices as a significant driver of productivity and profitability appears firm.”¹⁹⁸

While few of the samples from the study are large enough or varied enough to generalize to a wide business population, the results of the body of literature reviewed in the Department of Labor study strongly suggest that a correlation exists between high-performance human resource practices and positive business outcomes.

KEY TO ADVANCING high-performance organization is the fundamental value a firm places on its employees, the resource which arguably does more to determine business outcomes than all others combined. According to Robert Waterman, Jr., co-author of *In Search of Excellence*, “Corporate cultures that tend to put their three constituencies—shareholders, customers, and employees—on the same plane, as opposed to putting shareholders first, are perversely the ones that do best for shareholders.”¹⁹⁹

¹⁹⁷ Mavrinac, S.C., Jones, N.R., and Meyer, M.W. (1995). *The Financial and Non-Financial Returns to Innovative Workplace Practices: A Critical Review*. Washington, DC: U.S. Department of Labor, iii.

¹⁹⁸ *Ibid.*, 33.

¹⁹⁹ Jacob, R. (1995, March 16). Corporate reputation. *Fortune*, 54.

Advocates of high-performance organization view downsizing and increased reliance on temporary and contract workers as strategies that diminish the importance of human resources and, thus, adversely affect both productivity and competitiveness. Kochan and Osterman observe, “Unless advocates of human resource innovations overcome the pressures on organizational decision makers to behave in ways that discourage investments and innovations in human resources, the sustained improvements in performance and standards of living these innovations promise are not likely to be realized.”²⁰⁰ Indeed, successful team production models, such as those found in plants owned by Saturn, Xerox, and Corning, all have one characteristic in common—a strong commitment to employment security.²⁰¹ Some employers are forging a new social contract of “reciprocal investment,” providing employee services such as child care and transportation in exchange for employee energy, creativity and long-term commitment.²⁰²

Factors which positively influence employee performance in team-production workplaces include 1) sharing gains from productivity improvements; 2) fostering group cohesiveness, and 3) guaranteeing individual rights of employees.²⁰³ MIT’s Kochan and Osterman argue persuasively that the national interest will best be served by a reorganization of work in America to advance what they call mutual gains enterprises that give workers a real, rather than a token, voice, support their development through broad-based and ongoing investment in training and education, and reward the substantial contributions they make through various gain-sharing vehicles.

*Achieving and sustaining competitive advantage from human resources require the strong support of multiple stakeholders in an organization. Employees must commit their energies to meeting the economic objectives of the enterprise. In return, owners (shareholders) must share the economic returns with employees and invest those returns in ways that promote the long-run economic security of the work force.*²⁰⁴

HIGH-PERFORMANCE STRATEGIES not only offer firms the opportunity to raise performance, but also, research finds, to help reduce business costs. Habeck, Leahy, Hunt, Chan, and Welch conclude, “Companies who devote resources to keeping their employees will experience a return in lower

²⁰⁰ Kochan and Osterman, 42.

²⁰¹ Appelbaum and Batt.

²⁰² Calabria, D.C. (1995, April). When companies give, employees give back. *Personnel Journal*, 75-83.

²⁰³ Appelbaum and Batt.

²⁰⁴ Kochan and Osterman, 5.

accidents and claims incidence.”²⁰⁵ Workplace practices such as employee participation in problem solving, decisionmaking and profit sharing were identified as being among the elements contributing significantly to workplace safety. High-performance work organization, it was found, plays a role in accident prevention *and* the reduction of disability claims and costs.²⁰⁶

Today, workers’ compensation represents one of the most burdensome costs of doing business in Kentucky, as well as the United States. Workers compensation premiums are now the single fastest growing labor cost in the nation, one that poses particular problems for the small firms which comprise the majority of Kentucky’s business community. Among other reasons, escalating costs are attributed to fraud and abuse, rising medical costs, protracted legal battles, and, some critics suggest, eligibility criteria that have become too liberal.

Although these causes may seem beyond an employer’s control, Habeck, et al. come to an altogether different conclusion, “Employers . . . need to recognize that effective disability prevention and management for employment maintenance are a process that is centered in the employment setting and can be controlled, to some degree, by the employer.”²⁰⁷

Similarly, a quantitative analysis of the disability experiences of a group of diverse firms conducted by David Lewin and Steven M. Schecter concluded that human resource factors “can be enhanced to reduce disability experience.”²⁰⁸ The greater the experience of the workforce, the opportunities for employee involvement and participation, and the use of conflict resolution procedures, the lower the incidence of workplace disability.²⁰⁹ In short, the non-physical factors, particularly stress associated with the workplace, are as likely to contribute to disability claims as are physical risk factors within the workplace.

IF HIGH-PERFORMANCE ORGANIZATION garners such promising results, why aren’t more public and private institutions adopting these strategies? Very simply, organizational change is difficult, often costly, painstaking, protracted work that ultimately shifts power from a few managers to frontline workers. While managers who have successfully

²⁰⁵ Habeck, R.V., Leahy, M.J., Hunt, H.A., Chan, F., Welch, E.W. (1991, March). Employer factors related to workers’ compensation claims and disability management. *Rehabilitation Counseling Bulletin*, 34:223.

²⁰⁶ Ibid.

²⁰⁷ Ibid., 224.

²⁰⁸ Lewin, D. and Schecter, S.M. (1990). The determinants and consequences of workplace disability. (unpublished), 26.

²⁰⁹ Ibid.

engaged in organizational change are among its most forceful advocates, it nevertheless remains difficult.

Broadly, organizational change compels organizations to look long-term, beyond quarterly returns. It demands that people change, break long-standing, usually comfortable habits, communicate effectively, share power and work together cooperatively. But, in spite of the democratization it enables, labor unions have often resisted engagement in a strategy that is perceived as diminishing union authority and increasing individual workloads. Conversely, some of the most dramatic successes have taken place in unionized facilities, such as Ford Motor Company's Louisville Assembly Plant and Rohm & Haas' Louisville chemical plant.

While smaller organizations are obviously easier to restructure than sprawling bureaucracies, the cost of change clearly inhibits efforts to do so. Small- and medium-sized enterprises, such as those which dominate Kentucky's economy, for example, often lack the resources to make critical organizational and technological adaptations. Struggling to stay afloat in an increasingly competitive marketplace, small firms often view change as a luxury. Moreover, small firms may be unaware of the potential benefits of organizational change. Appelbaum and Batt cite the high initial training costs to build workers' skill levels, the absence of a clearinghouse of information on innovations and their consequences, and the absence of accounting standards to evaluate investments in human resources as the most significant obstacles to high-performance organization.²¹⁰ Importantly, each of these obstacles points to key roles states can play.

While the results of studies are mainly positive with regard to workforce empowerment, the adoption of TQM practices, for example, is not necessarily a certain path to increased productivity and profitability. Firms frequently experience disappointing results because of piecemeal approaches to change, rather than complete transformations.²¹¹ In order to upgrade they must analyze their firm's entire operations, develop a comprehensive plan for transformation and restructure accordingly.

²¹⁰ Appelbaum & Batt.

²¹¹ Ibid.

Though proponents of high performance fairly consistently view employment security as a cornerstone of success, the mature quality movement has witnessed a profusion of "lean and mean" organizations that do more with fewer people. Moreover, unwillingness to share increased profits with the workers who increased product quality and productivity has become all too familiar. The current American corporate social contract has

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been likened by Anthony Carnevale, chief economist and vice president of the American Society for Training and Development, to "the sound of one hand clapping," that

is, workers performing at higher and higher levels without the payoff that has historically followed. Indeed, recent evidence on corporate profits does not support the *high skills=high wages* formula advanced by a range of training and education advocates. While high performance work is necessary to stay in business, it has not translated into employee retention or reward. The "engaged, empowered employee" may be regarded as a valuable asset, but he or she is also an expendable cost.²¹²

BECAUSE INNOVATION, quality and productivity are key to success in the global marketplace, the focus of public investment must be sharpened to help firms adapt to the demands of the new context. Rising levels of worker knowledge and skill will simply be lost to organizations that are incapable of capturing its many benefits. As Carnevale observes, it makes little sense to train workers for jobs that do not exist. In the classic economic sense, demand must exist for the supply of high-performance workers. "Only the organization," Drucker notes, "can convert the specialized knowledge of the knowledge worker into performance."²¹³ Hence, low-skill, low-wage firms that are organizationally incapable of utilizing skills and knowledge are high-risk public investments.

Robert Zemsky and Penney Oedel, researchers with the National Center on the Educational Quality of the Workforce, suggest it is more than a matter

²¹² Kuttner, R. (1995, July 10). Needed: a two-way social contract in the workplace. *Business Week*, 22.

²¹³ Drucker, 68.

of risk, “Firms that are unwilling to upgrade production technologies and management methods are not ready to train.”²¹⁴ Consequently, states that train workers in traditional, low-performance industries are making high-risk investments that may yield minimal, if any, returns. Rather than blindly training their way out of a poor competitive position, Zemsky and Oedel recommend that states facilitate the transition to new business strategies.²¹⁵

According to Zemsky and Oedel, states must “meet each firm at its own level,” offer information and advocate for high-performance organization to firms unwilling to upgrade, and facilitate training programs for firms that have begun to upgrade their production facilities and management structures. In short, Zemsky and Oedel conclude, states should function as brokers of the supply of education and training,

States that train workers in traditional, low-performance industries are making high-risk investments that may yield minimal, if any, returns.

collecting and disseminating data on providers and assessing the quality of their services. “With leadership from the executive branch, existing agencies can lay the groundwork for a public referral service that helps match firms and workers with suitable schools, colleges, vendors, and other educational organizations.”²¹⁶

Funding, Zemsky and Oedel suggest, is merely “a secondary agent of change,” as firms that are genuinely committed to organizational change are prepared to invest.²¹⁷ “State policy can encourage further progress by offering tax incentives and access to low-cost capital, sharing the cost of new equipment or worker training, and developing additional mechanisms for cost-sharing among like-minded enterprises.”²¹⁸

Indeed, the previously discussed goals of developing industrial networks and institutional intelligence are integral to the cultivation of high-performance organizations. “Quality forms the basis for a network of partnerships. And companies need partnerships to move forward with quality.”²¹⁹ Partnerships among businesses require a foundation of trust and effective communication. Key to successful partnerships is the sharing of ideas and resources, which cannot be achieved in an atmosphere of distrust. State government can assist businesses interested in forming networks by performing

²¹⁴ Zemsky and Oedel (no date), 1.

²¹⁵ Ibid., 1.

²¹⁶ Ibid., 6.

²¹⁷ Ibid., 5.

²¹⁸ Ibid.

²¹⁹ Hiam, A. (1992). *Closing the Quality Gap: Lessons from America's Leading Companies*. Englewood Cliffs, NJ: Prentice-Hall, 173-188.

the critical research needed to establish a market foundation for networks and to foster trust. Some states promote links between firms in the fields of research and development and the dissemination of new technology, and others foster links between government agencies and private firms in order to promote exports. Likewise, state or regional industrial extension programs could provide information and assistance to firms that wish to modernize and help firms meet rising quality standards.

Jack Russell, President of the Modernization Forum of Dearborn, Michigan, argues that American firms must interdependently develop design and production technologies, worker skills and work organization, customer and supplier relationships, and market focus and managerial practices.²²⁰ He and other experts suggest that the federal and state governments should encourage modernization because many firms lack the expertise and capital to modernize, while some firms do not realize the necessity to modernize. Modernization requires economic development specialists to perform new studies, including global industry analysis, U.S. firm competitiveness analysis, parent corporation strategic analysis, and branch plant viability analysis.²²¹ In addition to technical expertise, firms will also need financial resources to transform their production lines into high-performance workplaces.

Unfortunately for Kentucky companies, state agencies have not established the institutional framework needed to help them effectively implement networking arrangements. There is a need to develop an information system to give all firms access to global industry best-practice standards and a need for research for designing global competitiveness strategies.²²² And many experts advocate the establishment of consortia of training and modernization service providers to be brokered by regional governments and/or regional institutions.

Several states have launched initiatives designed to promote the development of high-performance organizations. In Oregon, for example, the Oregon Quality Initiative was launched by a group of state employers subsequent to their participation in a legislative effort to learn more about such enterprises. The legislature's inquiry resulted in a series of recommendations on how to promote high-performance organization, including:

²²⁰ Glasmeier, A.K. and Conroy, M.E. (1993, October 7-9). *Global Squeeze on Rural America: Opportunities, Threats, and Challenges from NAFTA, GATT, and Processes of Globalization* (conference proceedings). Institute for Policy Research and Evaluation, Pennsylvania State University.

²²¹ Ibid.

²²² Ibid.

- disseminate information;
- set up a high-performance training fund;
- provide technical assistance to transitioning firms;
- establish continuous improvement user groups;
- incorporate high-performance techniques into training and education;
- expand state quality awards to recognize high-performance certification;
- make ISO 9000 international quality standards an Oregon standard; and,
- identify high-performance firms, their practices, and their needs from government.²²³

Essentially, Oregon's strategy is one of building a strong foundation of knowledge—institutional intelligence—about high-performance organization, facilitating its advancement, and recognizing those firms which adopt its practice.

Kansas has made the development of high-performance firms central to its strategic economic development plan, giving preference to firms that practice high-performance techniques under its incentive programs. Pennsylvania has modified its business assistance programs to place emphasis on cultivating high-performance skills. Connecticut gives firms that have adopted high-performance practices preference when allocating training dollars, requires agencies to meet performance goals in the cultivation of high-performance firms, and funds a collaborative training initiative linked to manufacturing networks. A grant program that will fund training for networks of employers is also being planned.²²⁴

Presenters at a 1993 Los Angeles conference on employment and training hosted by the National Governor's Association concluded that *a strong foundation of workforce and workplace literacy is essential to increasing the demand for high-performance work organizations*. Without sufficient demand, public investment in training may ultimately produce an oversupply of skilled workers. Presenter Patricia Moss, Indiana's director of workforce literacy, suggested that, "[t]raining for new technologies and organizational restructuring could only take place when workers had sufficient foundation skills for new knowledge."²²⁵

²²³ Lohman, T. (1992, September 22). High performance work organization: improving Oregon's competitiveness in the global economy. Report to the Joint Legislative Committee on Trade and Economic Development, 22-26; Goosman, W.F. (February, 1995). *Learning How to Compete: Workforce Skills and State Economic Development Policies*. Denver: National Conference of State Legislatures; Boston: Jobs for the Future, 13-14.

²²⁴ Goosman, 14-15.

²²⁵ NGA, 15.

In addition to creating quality workplace literacy programs, conference participants recommended that states:

- support opportunities for business networking, by helping to create order among the quality demands on small suppliers, assisting employers in their understanding of the benefits of high-performance organization, and working with networks of firms;
- develop “second generation” business-education partnerships by assisting in the identification of training and education needs, developing policies that ensure all students have opportunity to meet national standards, and promoting skills certification as a hiring standard; and,
- support new consortia to impart skills, utilizing technology to share “best practices,” supporting “teaching factories” and other business-learning consortia.²²⁶

Clearly, state policy and practices can play a vital role in developing a market for high skills through the cultivation of high-performance organizational practices. Here in Kentucky, we can build upon the framework of recommendations offered by the Kentucky Science and Technology Council (KSTC) in their 1994 report:

- establish a statewide vision of Kentucky as a high-performance state;
- establish a plan of action to guide development of high-performance organizations throughout Kentucky;
- conduct an audit of policies and regulations that impede their development and remove barriers;
- establish high-performance teams to support firms, organizations, and communities; and,
- provide incentive grants to support high-performance network development.²²⁷

Such an effort would coordinate governance, by bringing focus to a critical effort and creating collaborative interagency teams that joined such entities as the University of Kentucky Community College System, Workforce Development Cabinet, the Labor Cabinet, all of which provide vital high-performance training, and the Economic Development Cabinet in a unified strategy.

²²⁶ Ibid., 15-17.

²²⁷ Daly et al., 36.

Simultaneously, state government must begin broad-based internal efforts to modernize, to create an integrated system of learning organizations that enable empowered employees to shape creative, collaborative approaches to solving the problems that continue to inhibit the development of the Commonwealth. By dedicating attention to these critical goals, state government can become far more effective and efficient, *and* the Commonwealth can begin to enjoy the myriad benefits of having a compelling national profile as a leader in progressive governance.










Conclusion

*C*LEARLY, *SUBSTANTIAL THOUGHT* and energy have been dedicated to the formidable challenge of restructuring our state's and our nation's approach to workforce development. And extraordinary progress has been made. Rather than plow well-tended ground yet again, we offer observations about larger systemic and structural issues that affect our ability to garner maximum returns from public investment in workforce development.

Clearly, the cultivation of a highly skilled workforce in Kentucky depends upon our ability to focus strategically; to integrate and coordinate public efforts; to expand broadly our base of information about the range of social, economic and demographic factors that influence our workforce; and to utilize existent resources more fully, namely Kentucky Educational Television and the Kentucky Information Superhighway.

At the same time, we must confront vexing structural issues by establishing a strong factual foundation for policymaking and encourage institutional collaboration through the strategic use of financial rewards. Perhaps no structural issue is of more importance than the changing role of higher education. Higher education must bring concerted attention to the needs of an emerging and significant customer base—working adults—or risk loss of standing in the coming years. Leaders of the higher education community are also being challenged to discover ways of delivering a high quality product at a reduced, rather than an increased, price. The importance of ensuring equal educational opportunity is so critical that policymakers must consider linking financial rewards to tuition cost reductions.

POLICY OPTIONS

-  Adopt high-performance as part of a statewide vision and diffuse high-performance approaches throughout state government and the programs it administers
-  Incorporate high-performance ideas and approaches into existent curricula at all levels
-  Identify successful practices of high-performance firms and disseminate transferable information
-  Enlist model firms in the promotion and advancement of organizational change in the public and private sectors
-  Prohibit public training investment in low-performance firms unwilling to change
-  Provide coordinated technical assistance
-  Provide training incentives to advance high-performance networks
-  Audit policies and programs to eliminate institutional obstacles to the advancement of high-performance within state government and the programs it administers
-  Set an example of high-performance by promoting efficient, effective, quality governance, supported by model human resource practices

Finally, we join the Kentucky Science and Technology Council, the Governor's Commission on Quality and Efficiency and others in urging concerted attention to the development of high-performance organization in the private *and* public sectors. Such an approach would help improve productivity, profitability and prosperity, and secure maximum impact from scarce public resources.

Ultimately, workforce *and* economic development outcomes in Kentucky will hinge upon whether the organizations of state government change, empower employees and bring the fullest possible intellectual energies to the enormous challenges before us.

CONCLUSION

In the knowledge society, for the first time, the possibility of leadership will be open to all.

Peter F. Drucker

*I*N THE RUSH to close education and training gaps and raise skill levels, states are experimenting broadly with strategies for workforce development. Kentucky is no exception. Like other states, we seek to emulate European systems that introduce young people to the world of work at a much earlier age than is typical of the American experience and offer alternative, fully integrated educational tracks. We envision a workforce development system characterized by uniform standards, high quality and ready accessibility or “seamlessness.” It will offer individuals of diverse capabilities the opportunity to learn and acquire credentials that are relevant to the marketplace. It will bring critical attention to the demand for skills, as well as the supply, encouraging and enabling firms to perform at levels commensurate with the emerging skill base.

Clearly, much work is left to be done. Reform efforts continue to be hamstrung by traditions that inhibit our very capacity to change, as well as our ability to benefit from it. But the pressure for change is unlikely to abate. In order to respond, public institutions must become more flexible and more customer oriented. They must make many of the same adaptive organizational changes that are underway in the private sector and bring critical focus to process—how people are being taught and trained, how education and training is coordinated, and how we respond to private sector needs. At the same time, unprecedented attention must be brought to the quality of the education and training product.

As change agents in the private and non-profit sectors will readily attest, the transformation of organizations with deep traditions is difficult, time-consuming and sometimes painful. Nevertheless, the future capacity of Kentucky’s workforce and the future prosperity of the citizens of the Commonwealth may depend on how rapidly our institutions of higher learning adapt to the demanding context in which we live.

***I**N ORDER TO MAXIMIZE RETURNS* on public investment in workforce development, we must bring critical focus to our efforts, better utilize existing resources, engage in organizational change throughout the public sector, and encourage its adopting in the private sector. Inattention to the demand side of the training and education equation substantially increases the risk associated with public investment in workforce development.

To achieve our long-term goals, we also must close a persistent basic skills gap that has for too long stood between the people of Kentucky and

Through wise, informed investments in training and education, we can create perhaps the strongest incentive for the pursuit of education—evidence that it changes lives for the better.

broader prosperity. Through wise, informed investments in training and education, we can create perhaps the strongest incentive for the pursuit of education—evidence that it

changes lives for the better. We also must assist under-financed small- and medium-size firms, particularly through the cultivation of industry networks, and encourage the development of high-performance work organizations through incentives and disincentives.

Indeed, economic development decisions about those industries we provide with financial incentives must be brought into alignment with overriding, interagency goals, the coordination of governance which the Governor's Commission on Quality and Efficiency has so strongly urged. If our principal goal is greater prosperity—higher incomes for the citizens of the Commonwealth—it will most likely be realized over the long term through an increasing supply of high-skill, high-wage workers met with an equally strong demand from high-performance workplaces. Public investment in the advancement of low-skill, low-wage, low-performance industries that are far less likely to make an enduring contribution to our economy is, at best, a risky commitment of scarce public resources. Alternatively, we must adopt a long-range strategy that integrates the missions and roles of agencies and seeks ways to leverage the highest possible return from the limited public resources at our disposal.

***R**REALIZATION OF THE IDEAL* “system” for workforce development, unfortunately, is not enough to ensure broad access to the opportunity to prosper. Instead, many observers suggest that we also must rebuild and

restructure fundamental relationships in our society, particularly the bond between employees and their employers. Even as we discover more about the direct role this relationship plays in profitability and productivity, it is being severely eroded in the United States. The long-term implications are disturbing.

Work in America has become more tenuous and, for many, less financially rewarding, frustrating the efforts of policymakers to help foster greater prosperity. Many firms have responded to the pressures of international competition by paring their permanent labor forces or increasing their reliance on contingent workers, for whom costs *and* benefits are typically lower. An estimated one in three jobs in the United States is now contingent,²²⁸ that is, temporary, part-time, or contractual.

While past experience suggests that broadly expanded prosperity is on the horizon, promising to break a two-decade-long era of stagnant wages, some suggest that we are undergoing a dramatic restructuring of work. The darkest visions of the future before us are of anything but the highly collaborative, richly participative, “mutual gains enterprises”²²⁹ now widely advocated as the most reliable avenues to sustained competitiveness *and* broader prosperity of increased equity.

Consequently, part of the work of capturing the fullest potential of Kentucky’s, indeed the nation’s, workforce is clearly that of rebuilding and strengthening social relationships on which our economic strength depends. To do so, we must encourage and enable employers to choose the high road, to commit to education, training, participatory management, increased employment security and shared gains for workers. B & H Tool Works in Richmond, Kentucky, for example, has shown where the high road can lead an organization dedicated to learning—to higher skills, higher wages, higher profits and broader prosperity. Ultimately, only the high road offers a path to sustainable development.

CLEARLY, *PROSPERITY IS NOT MERELY A CHOICE*. Instead, it is the product of outcome-oriented action. In this case, it must be focused on the development of a highly skilled workforce *and* on the cultivation of economic and social circumstances that will enable broad prosperity over the long term. The stakes are perhaps higher than ever before. The prosperity that has eluded the Commonwealth’s grasp throughout the 20th Century is the potential return on this investment of political and institutional will.

²²⁸ Pennington, H. (1995, April 19). The challenge of high performance (speech). Creating the High-Performance State Conference, Kentucky Science and Technology Council.

²²⁹ Kochan and Osterman.

While no investment strategy comes with a written guarantee of returns, the absence of one, in this case, does. Without knowledge and the skill it enables, the working people of Kentucky face a bleak economic future. Peter F. Drucker envisions that future as one in which dominant “knowledge workers” ultimately will reckon with the “social challenge” of how to treat non-knowledge workers.²³⁰ Rather than become the focus of a new social challenge, we envision a future in which Kentuckians will figure prominently among those leaders who will shape a fair and just society.

²³⁰ Drucker, 67.

APPENDIX

Selected Characteristics of Kentucky's Workforce Development System

UNIVERSITY OF KENTUCKY COMMUNITY COLLEGE SYSTEM

The Community College System (CCS) was established by the University of Kentucky Board of Trustees in 1964, based on authorization by the Kentucky General Assembly in 1962. The 14 community colleges in the System are individually accredited by the Commission on Colleges of the Southern Association of Colleges and Schools. Through the Community College System, Kentuckians have access to educational programs at more than 100 extended sites, centers and campuses. The CCS mission is to provide three types of educational programs:

- Transfer academic curricula which may be applied to baccalaureate degrees;
- Technical and semi-professional associate in applied science degree programs designed to prepare students for immediate employment; and,
- Continuing education offerings for professional development, occupational training and life enrichment.

Associate in Applied Science Degree Programs. The CCS offers 31 technical associate in applied science degree programs that combine occupational education with collegiate course work in mathematics, sciences, communication and other general education areas. Almost half of the System's credit student enrollment is enrolled in technical programs. More than 97 percent of the 1993-94 technical program graduates who sought jobs found employment, and more than 95 percent of those graduates indicated that the job was in a position related to their major or in a position as desirable as one related to their major.

The new Technical Studies program leading to an associate in applied science degree is a joint venture with the Kentucky Tech System in the Cabinet for Workforce Development. In addition, six associate in applied science degree programs are offered as joint programs with Kentucky Tech, and articulation agreements between the CCS and the Kentucky Tech System are in place for nine curriculum areas.

Three statewide articulation agreements involving secondary schools, Kentucky Tech schools, community colleges, and regional universities are scheduled to be in place July, 1996. These pertain to early childhood education, electronics/engineering and the computer area.

Community College System Career Programs

Allied Health & Nursing

Bio-Medical Equipment Technician*
 Clinical Laboratory Technician
 Dental Hygiene
 Dental Laboratory Technology
 Nuclear Medicine Technology
 Nursing
 Occupational Therapy Assistant
 Physical Therapist Assistant
 Radiography*
 Respiratory Care*

Business and Related Technologies

Accounting Technology
 Business Technology*
 Computer Information Systems
 Office Systems
 Real Estate

Engineering and Related Technologies

Architectural Technology
 Engineering Technology*
 Industrial-Electrical Technology
 Quality Technology
 Mining Technology

Other

Automotive Technology*
 Commercial Art Technology
 Communications Technology
 Culinary Arts
 Early Childhood Education
 Environmental Science Technology
 Fire and Arson Technology
 Forest and Wood Technology
 Human Services
 Law Enforcement Technology
 Technical Studies*

*Approved as a joint program with Kentucky Tech at selected community colleges.

Continuing Education/Business & Industry Services. The community colleges meet workforce development needs in their local communities through their continuing education programs and business and industry services, as part of their public service mission. Courses may be customized for a specific business' need and offered at the time and location that the company requests. The Community College System served approximately 360,000 Kentuckians through the colleges' continuing education and business and industry services, with more than 46,000 of these individuals participating in programs developed on behalf of more than 1,100 businesses and industries.

The Community College System's continuing education and business and industry services program is provided primarily through a self-supporting budget. For example, during 1993-94, the Community College System's total general public service expenditures amounted to more than \$8.2 million. Of this amount, only a small portion was derived from state appropriations as these funds were largely self-generated through continuing education tuition and/or contracts with Kentucky's businesses and industries. The 1993-94 amount represents a 32.9 percent increase over the 1992-93 general public service expenditure.

If Kentucky's businesses are to compete in a global economy, the transformation to high-performance organizations is critical. The only way to systematically ensure that transformation is through education and training in the foundations and principles leading to high performance. The Community College System provides that organizational transformation education and training and assistance to many businesses and industries across the state. Examples of the community colleges' focus on continuing education offerings that help promote economic development follow.

Work Profiling System. The Work Profiling System (WPS) provides a comprehensive job analysis methodology which collects information on job tasks, job context factors, skill and ability requirements, and other organizational information. Once the job analysis is complete, this information can be used to develop screening processes to select new employees, to promote employees from within, or to identify training needs of individuals. The job analysis

information can also become the foundation for restructuring an organization's personnel system through the development of performance appraisals, training and development plans, job descriptions, team development plans, process improvement projects, re-engineering plans, and job evaluation and compensation projects.

Through the computerized WPS system the University of Kentucky Community College System maintains a data base for jobs within the state along with the skill and ability requirements for those jobs. This data base enhances the ability of the Community College System to provide appropriate education, training, and retraining programs to meet the needs of employers throughout the state.

MANUFACTURING SYSTEMS/QUALITY TRAINING

Mobile Training Unit. This mobile unit delivers on-site, high-technology training to business and industry across the state of Kentucky. The unit is a self-contained training center fully equipped with industrial quality, state-of-the-art equipment, hardware and software to provide courses.

Lean Manufacturing. This manufacturing system simulation, developed jointly by the UK Center for Robotics and Manufacturing Systems and the Toyota plant of Georgetown, is offered to business and industry by the community colleges. This manufacturing philosophy focuses on shortening the time line between customer order and shipment through waste elimination.

Computer Numerical Control (CNC). Basic and advanced courses are delivered on community college campuses or at plant sites via a mobile laboratory. Introductory courses offer the fundamentals and operation of CNC machine tools and cover basic "G" and "M" codes and machine coordinate systems. Advanced courses provide a continuation into dimensioning and coordinate systems for use of absolute and incremental operating modes.

Programmable Logic Controllers (PLC). The community colleges offer beginning courses which introduce the structure and general operation of PLC's and ladder logic programming formats. The more advanced courses can be tailored to meet plant requirements.

Computer Aided Design (CAD). Any level of CAD instruction can be delivered on site by the community colleges. Classes ranging from basic drawing commands to the advanced concepts of the "3D Studio" are available.

Statistical Process Control (SPC). The Community College System developed the capacity to offer training in this area in the mid 1980s. Initial training was provided through Ford Motor Corporation's World Headquarters in Dearborn, Michigan, and closely follows the Deming philosophy. Today, components such as short runs, team development, and product sampling techniques are included in the core curriculum, and SPC training is the foundation of Quality Improvement curriculum.

Design of Experiment. Training provided by the community colleges follows accepted statistical methodology common to experimental design for the improvement of product and process design, development, process troubleshooting, and quality improvement.

ISO-9000 & QS-9000. The Community College System offers ISO-9000 and QS-9000 training for all levels of employees from management to lead auditor to plant floor personnel.

Other Related Courses. The community colleges offer instruction in other related courses required for a "job-ready" workforce. Examples:

- *Basic Skills:* Communications, Reading, Math, Problem Solving, Precision Measurements, Blueprint Reading, and Teamwork

- *Technical Skills:* Blueprint Sketching, Electricity (AC/DC), Geometric Tolerancing, Metallurgy, and Welding
- *Maintenance and Repair:* Mechanical, Electrical, Hydraulics, Pneumatics, Electronics, and Motor Controls
- *Occupational Health and Safety:* Ergonomics, OSHA Guidelines, and Safety

OCCUPATIONAL AND PROFESSIONAL DEVELOPMENT OFFERINGS

Computer Productivity. The community colleges offer a wide range of computer instruction for business and industry as well as the general public. Training is available on all of the latest Windows compatible programs: WordPerfect, Microsoft Office, PowerPoint, Excel, Word, Lotus 1-2-3, Quattro Pro, Quick Books, MS-DOS, Auto-CAD 12, Harvard Graphics, and others such as Novell Networks, Network Cabling, and PC Maintenance and Repair. The colleges can design special classes in any of the applications listed or in commercial or "company specific" software.

Adult Basic Skills Education. The community colleges provide a variety of opportunities for literacy training, GED preparation and testing, and for the development of other basic skills needed by employees. Examples include the partnerships between the colleges and various industries resulting in Skills Enhancement Centers or Adult Learning Centers which may be located on the college campuses or at plant sites.

Other Occupational and Professional Development Offerings. The community colleges provide occupational and professional development offerings that enable individuals to maintain licensure/certification in their professions. Examples include offerings for emergency medical technicians, dental hygienists, paramedics, nurses, accountants and social workers.

ORGANIZATIONAL TRANSFORMATION

In keeping with the latest philosophies of high-performance organizational education and training, the Community College System is one of the few educational institutions in the region to offer classes in Organizational Transformation. A sampling of the courses and the participating organization's outcomes follow:

Fundamentals of Personal and Organizational Leadership. Students/employees increase proactive behavior; develop a mission statement, personal daily planning skills, and listening skills; and learn team building.

Transformation to Quality: Principles to Practices. Students/employees develop an understanding of organizational cultural changes that must be undertaken to implement the Deming/Covey/Joiner philosophies and/or lean manufacturing.

Effective Meeting and Facilitation Skills. Students/employees identify meeting content versus process, learn to deal with disruptive group behaviors, and to recognize the uses of feedback in facilitation.

TQT Assessment. Business and industry liaisons gather data and impressions of their organization's current level of quality practice, and monitor effectiveness of an ongoing quality initiative.

Foundations and Principles of Quality. Students/employees document customer needs and expectations; develop an organizational systems map and key quality

measures; coordinate strategic planning; and look at new approaches to design, improvement and alignment.

Strategic Management. Organizations identify organizational values, vision, mission, goals, strategies, action plans, and create a communication strategy.

Quality Standardization/Improvement Methods. Students/employees develop an understanding of the six basic principles of total quality; identify statistical and problem-solving tools for the purpose of standardization and improvement.

Fundamentals of Fourth Generation Management. Employees develop an understanding of the need to change the way we do business in this country, and that Fourth Generation Management represents a paradigm shift in how we approach management.

BUSINESS & INDUSTRY TECHNICAL ASSISTANCE CENTERS (BITACs)

The Business and Industry Technical Assistance Centers are another way the community colleges work in partnership with business and industry to promote economic development. The centers offer resource information, entrepreneurial training, strategic management planning, business consulting and counseling for small business owners and those wishing to begin their own businesses. The primary mission of a Center is job creation.

CCS DISTANCE LEARNING NETWORK

Community colleges are well positioned to utilize distance learning technologies in the workforce training arena. Eight of the 14 colleges now have compressed video capability, with all institutions slated to be on line by the end of the 1996-1997 academic year. All 14 colleges are KET downlink sites, and have used the network for the delivery of a variety of workforce education programs.

CENTER FOR KENTUCKY RURAL ECONOMIC DEVELOPMENT

Somerset Community College has entered into a partnership with the Southern Kentucky Economic Development Corporation, Southern Kentucky Tourism Development Association, the Southern Kentucky Agriculture Development Association, and Kentucky Educational Television to connect the region with the world and to provide support for area entrepreneurs, industries, educators and farmers. The Center for Kentucky Rural Economic Development includes a 760-seat auditorium/theatre, a conference and exhibition center, auxiliary meeting rooms, a television production studio, office space and nearly 9,000 square feet of support space. The Center provides an economic "window to the future" for the 40-county region.

CCS AND OTHER WORKFORCE DEVELOPMENT AND TRAINING PROGRAMS

The community colleges work with the Department for Technical Education and other departments in the Cabinet for Workforce Development as partners in major federal workforce development and training programs. These include the Job Training Partnership Act, the Carl D. Perkins Vocational and Applied Technology Education Act, the School-to-Work Opportunities Act, One-Stop Career Center Initiatives, and the Adult Education Act.

Additionally, all 14 community colleges are involved in the Tech Prep initiatives sponsored by the Department for Technical Education. Several of the colleges serve as the

fiscal agent for the Tech Prep projects. Tech Prep is an educational program consisting of a sequence of courses and requirements that identify both academic and technical courses that lead to a specific associate degree in a technical field at a community college or a two-year diploma at a post-secondary vocational-technical school.

CCS PARTNERSHIPS WITH UK

Center for Manufacturing Systems. The community college business and industry liaisons work closely with the University of Kentucky Center for Manufacturing Systems, a branch of the UK College of Engineering, and business and industries in each college's service area. The liaisons, similar to UK's agricultural extension agents, have full access to the services of the UK Center to provide technical assistance for manufacturing methods and processes. The Lean Manufacturing System Simulation previously described is an example. The liaisons also help design, evaluate and utilize alternative manufacturing methods. They modify or convert tools and equipment, processes and layouts, and keep companies informed of the latest advancements in management systems and materials movement processes.

Technology Applications Center. The University of Kentucky's Technology Applications Center (TAC) supports industry both on the UK Campus and across the state through the Community College System by offering services to assist in the growth and development of businesses and industries. CCS has access to the Technology Access Network of Kentucky (TANK), an electronic bulletin board system operated by the Technology Applications Center of the University of Kentucky in partnership with the Southern Regional Technology Transfer Center of NASA and the Kentucky Technology Service. The TANK Bulletin Board System capabilities include: teleconferencing, electronic mail, forums, file libraries, polls and questionnaires, data bases and Internet access.

ACCOUNTABILITY

The Community College System reports its performance on 14 specific performance indicators as a part of the Kentucky higher education accountability reporting process. Kentucky accountability legislation (KRS 164.095), implemented in 1992, requires all public higher education institutions to participate in the process. In order to appropriately assess institutional performance, goals were established for each indicator after baseline data were collected in 1992-93. Goals pertain to student performances on licensure examinations, student survey results, graduation and persistence rates, degrees awarded, success rates of remedial students, public service efforts (including business and industry training), and others. Additional information is available in the *University of Kentucky Community College System 1995 Accountability Report*.

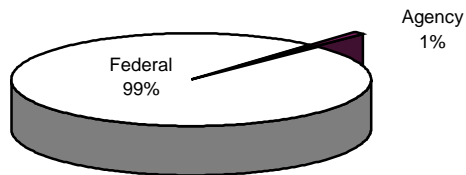
WORKFORCE DEVELOPMENT CABINET

Department for Employment Services. The Department for Employment Services was transferred to the Cabinet for Workforce Development in March 1995 from the Cabinet for Human Resources. The move had been recommended by several organizations and groups over the past few years as a means of further consolidating workforce development resources.²³¹ The department administers employment services, unemployment insurance, and dislocated worker programs, and provides labor market information. Employment Services also assists job seekers and employers.

The Department provides job placement and unemployment insurance services through 27 full-service field offices and many full- and part-time branch offices statewide.²³² These services include counseling, employment testing, job development, referral and placement for any persons needing such services, especially veterans and other groups with special needs, including welfare recipients and participants in the JOBS program. The Department provided services to almost 275,000 individuals during the 1993-94 program year, approximately 78 percent of more than 350,000 registered clients.²³³

In FY 1994, the Department of Employment Services, then part of the Cabinet for Human Resources, received almost \$421 million in appropriations and expenditures, nearly 99 percent of which were allocated by the federal government. A total of more than \$310 million (74 percent) was spent by the federal government on the Unemployment Insurance program, which provides benefits to workers who are involuntarily unemployed. Revenue for benefits payments is generated by a tax on employer payrolls, which is collected by the state and deposited in the Federal Unemployment Insurance Fund where it is redistributed by the federal government.

FIGURE A.1
Department for Employment Services
FY 1994 Appropriations: \$420 Million



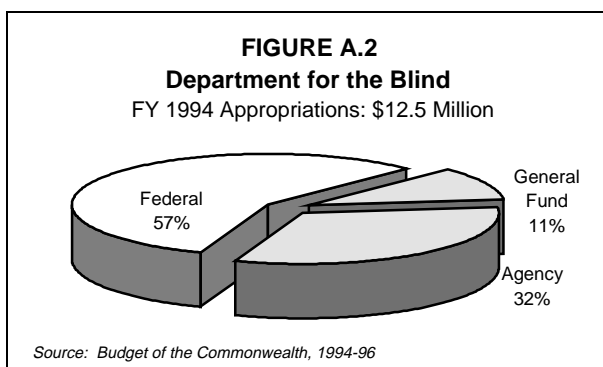
Source: Budget of the Commonwealth, 1994-95

²³¹ Among these organizations are the Governor's Commission on Quality and Efficiency (1993, October) and Roger Vaughn and Associates (1991).

²³² Kentucky Cabinet for Workforce Development. (1995, August). Draft overview.

²³³ Kentucky Cabinet for Workforce Development, Department for Employment Services. (1994, July 7). Report A22, Frankfort, KY.

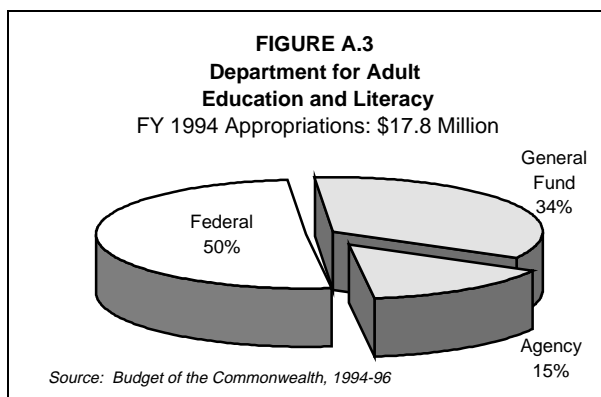
Department for the Blind. The General Assembly transferred the Department for the Blind from the Education and Humanities Cabinet to the Workforce Development Cabinet in 1990. Traditionally, the Department had maintained a strong partnership with the Department of Vocational Rehabilitation, dating back to the 1970s when both departments were under the governance of the Department of Education. The Department for the Blind assists individuals with severe visual impairments whose disabilities affect their capacity in the workplace or at home. In 1994, the Department for the Blind served more than 1,300 clients.²³⁴ The Department received appropriations of almost \$12.5 million in FY 1994, more than \$7.1 million (57 percent) of which derived from federal grants.²³⁵



The Department for the Blind divides its operations into two general service areas: Vocational Rehabilitation and Independent Living. Vocational Rehabilitation services prepare clients for and help them obtain employment. These services include medical evaluation and assistance, access to technical equipment and visual aids, job retention services, and vocational evaluation and training. Independent Living services help clients develop daily living

skills. The Department for the Blind served more than 700 clients through Independent Living Services in 1994, most of whom received all or some services at the Charles McDowell Center in Louisville. Clients live at the center while they receive counseling and personal adjustment services; improve transportation, communication and household management; develop technical abilities in Braille and computing; and plan careers.

Department for Adult Education and Literacy. The Office of Adult Education Services and the Kentucky Literacy Commission moved to the Cabinet for Workforce Development in 1990 and shared the duties of delivering basic education services to adult Kentuckians until 1993. In that year, both agencies merged to form the Department for Adult Education and Literacy. The goal of consolidation was to increase cooperative efforts between the volunteer literacy and adult basic education communities and to help reduce the problems caused by illiteracy and inadequate education.



²³⁴ Kentucky Cabinet for Workforce Development, Department for the Blind. (1995, August). Brochure #155-016.

²³⁵ Commonwealth of KY.

The Department spent a total of about \$17.8 million in FY 1994, receiving roughly half of its funding from the federal government. During program year 1993-94, the Department provided 140 adult basic education programs and 112 literacy programs to more than 42,000 adults. Approximately 98 percent of the program participants were in the primary workforce age group (16-59 years); 65 percent of these participants were unemployed.²³⁶

The Department provides services in every county via subcontracting arrangements with 241 agencies, including local education agencies, community-based organizations, corrections facilities, and public housing authorities. The Department also provides instructional resource and professional development materials, training items, and research and support services to agencies through the Center for Adult Education and Literacy. The Center has more than 5,500 items available for use by teachers, volunteers, businesses and others.²³⁷

The Department chooses agencies to provide services through a request for proposals (RFP) process, considering the quality, efficiency and affordability of the services in each proposal. In addition to these factors, the Department requires a county plan in proposals that outlines the ways in which service providers will collaborate and coordinate with one another to avoid service duplication. The Department has developed quality indicators to evaluate program performance in the areas of educational gains, program planning and evaluation, curriculum, instruction, instructional setting, support services, recruitment and retention. A recent grant from the National Institute for Literacy will permit further development of policy and program outcome measures as well as performance benchmarks.

The Department serves a wide range of people through its programs, including adults without high school credentials; unemployed parents; minorities; adults with disabilities; homeless adults and families; adults with limited English proficiency; institutionalized or incarcerated individuals; public housing residents; at-risk youth; and recipients of public assistance.²³⁸ Despite the broad diversity of adults who enroll in adult literacy programs, the Department offers some programs that target specific groups. Two of these targeted programs are the Workplace Essential Skills (WES) program and the Parent and Child Education (PACE) program. WES targets currently employed adults who lack literacy or other essential skills, providing basic skills instruction to employees at their workplace while incorporating information used by the employees in performing their daily job duties.²³⁹ WES training is coordinated by eight regional supervisors, who confer with businesses to “develop need” and build capacity for essential skills training. In 1994, more than 700 adults participated in workplace literacy programs at seven sites.²⁴⁰

The PACE program strives to improve the education levels of adults without high school credentials and to provide preschool education for the three- and four-year-old children of these parents. Parents and children attend school simultaneously. Parents receive adult basic skill instruction, children receive early childhood education, and both groups share learning experiences and activities together. In 1994, PACE programs served undereducated parents and their preschool children at 36 sites throughout Kentucky.²⁴¹

²³⁶ Kentucky Cabinet for Workforce Development, Department for Adult Education and Literacy. (1993). *Vision. 1993-94 Annual Report*, Frankfort, KY.

²³⁷ Ibid.

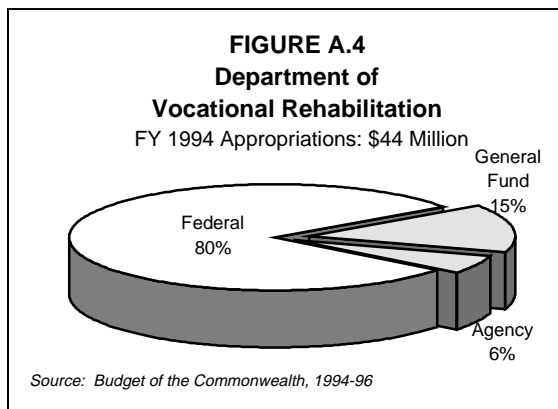
²³⁸ Ibid.

²³⁹ Kentucky Cabinet for Workforce Development. (1994). *Building a Commonwealth of Learners: Kentucky and the 1994 National Education Goals*, Frankfort, KY.

²⁴⁰ KY Cabinet for Workforce Development, Dept. for Adult Ed. and Literacy (1993).

²⁴¹ Ibid.

Department of Vocational Rehabilitation. The Department of Vocational Rehabilitation moved from the Department of Education to the Cabinet for Workforce Development in 1990. The Department develops and implements programs of vocational rehabilitation services that enable persons with disabilities to gain suitable employment or enhance independent living skills, including services provided through the Americans with Disabilities Act of 1992. In 1994, the Department provided services for 34,800 Kentuckians with disabilities. Almost 4,600 participants were successfully placed in employment.²⁴²



The Department consists of four divisions: Administrative Management, Program Services, Program Planning and Development, and the Carl D. Perkins Comprehensive Rehabilitation Center. In FY 1994, Department appropriations stood at approximately \$44 million, the majority (80 percent)

of which came from federal grants.

Divisions are located in four regions, 13 districts, and 60 offices statewide. The division of Administrative Management provides technical and budget related services for the Department. The division of Program Services is responsible for the actual processing and delivery of client services. Program Planning and Development promotes equity and efficiency in the Department's service delivery. The Carl D. Perkins Comprehensive Rehabilitation Center (CDPCRC), located in Thelma, is the only state-operated, comprehensive residential rehabilitation facility in Kentucky.²⁴³ The CDPCRC offers vocational assessment, personal and social adjustment services, vocational skills training, adult basic education, housing and transportation, as well as a number of other professional services. In FY 1994, appropriations for the CDPCRC reached more than \$5.3 million, approximately 90 percent of which were provided by federal grants.²⁴⁴

Department for Technical Education. The Department for Adult and Technical Education was established as part of the Cabinet for Workforce Development in July 1990. In 1993, the department was reorganized and renamed the Department for Technical Education. The department manages and operates Kentucky Tech, the state's system of technical schools, distributes federal vocational and technical education grants, and provides technical assistance to secondary and post-secondary programs in the Kentucky Tech System. In FY 1994, the Department for Technical Education spent more than \$116 million on vocational and technical programs and administration. Of that, almost 26 percent came from federal funds.²⁴⁵

The Department for Technical Education is composed of the Commissioner's Office, the Office of Kentucky Tech, the State Board for Adult and Technical Education, and the Division of Federal Programs and Support Services. The Office of Kentucky Tech provides guid-

²⁴² KY Cabinet for Workforce Development (1994).

²⁴³ Kentucky Cabinet for Workforce Development, Department for Vocational Rehabilitation. (1995, August). Brochure (draft).

²⁴⁴ Commonwealth of KY.

²⁴⁵ Ibid.

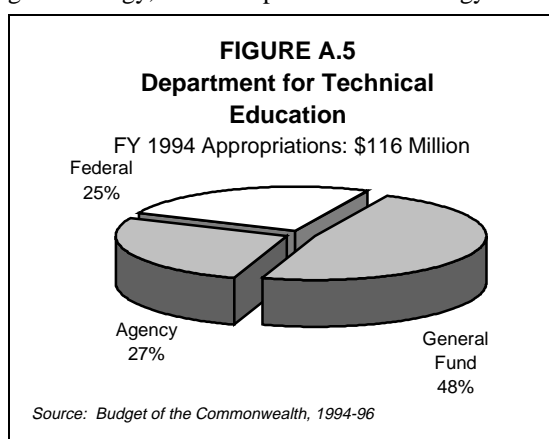
ance for administrators and managers of secondary and post-secondary technical training programs and technical assistance to improve school operating procedures and program operations in the Kentucky Tech system. The Kentucky Tech System consists of 23 post-secondary institutions (17 state technical schools, 5 health technology centers, and one advanced technology center), 55 area vocational education centers for secondary education, and 10 vocational-technical schools within the state's prison system.²⁴⁶ All Kentucky Tech sites are state-operated, but only the post-secondary institutions are state-owned. Secondary vocational facilities are locally owned by school boards, but the schools are operated by Kentucky Tech. Technical schools operating within state correctional facilities are under contract with the Justice Cabinet, Department of Corrections.²⁴⁷

The Kentucky Tech System offers training in over 50 program areas in a number of fields, such as business technology and graphic communications, construction technology, health and human services, manufacturing technology, and transportation technology. Post-secondary programs are designed for adults, high school graduates, GED recipients and others who demonstrate the ability, interest and aptitude for technical training. The area vocational education centers offer selected post-secondary programs while providing occupational training for secondary students.²⁴⁸

The Kentucky Tech Skill Guarantee ensures employers who hire a Kentucky Tech graduate that a former student at any of the Kentucky Tech schools who performs below a satisfactory level in his or her certified skill within two years of graduation will be

retrained at no charge. The Kentucky Tech System currently boasts a 96 percent placement rate for post-secondary students, though not all graduates find jobs in their certified skill.²⁴⁹

The State Board for Adult and Technical Education is appointed by the governor and consists of nine members, representing the seven Supreme Court districts and two at-large positions. The Board develops and implements policies to govern, coordinate, operate and evaluate vocational-technical and adult education programs operated by the Department for Technical Education and the Department for Adult Education and Literacy, including all of the Kentucky Tech System. The Board is also responsible for approving state plans for adult and technical education to meet federal regulations, including the State Plan for Adult Education under the National Literacy and the State Plan for Vocational Education under the Carl D. Perkins Vocational and Applied Technology Education Act of 1990. The Board is assisted by the Governor's Council on Vocational Education, which evaluates the scope and effectiveness of coordination between the state technical education system and job training



²⁴⁶ Commonwealth of KY.

²⁴⁷ Cabinet for Workforce Development, Department for Technical Education. (1992). Annual Report 1992-93, Frankfort, KY.

²⁴⁸ Cabinet for Workforce Development, Department for Technical Education. (1995) Kentucky Tech Post-secondary Catalog, 1995-1996, Frankfort, KY, 1.

²⁴⁹ KY Cabinet for Workforce Development. (1994), 61.

programs at state and local levels. The Council reports its findings to the Board and the executive branch.

The Division of Federal Programs and Support Services is responsible for administering the Carl D. Perkins Vocational and Applied Technology Education Act for school districts, colleges, and universities. The Perkins Act distributes federal funds to states to improve technical programs and reward innovative methods of program administration. Most Perkins Act funds are used to develop training programs. In FY 1994, more than \$16 million (90 percent) of the \$18 million spent by the Division of Federal Programs and Support Services was allotted for program improvement.²⁵⁰

The remaining Perkins Act funds were devoted to TechPrep. The goal of TechPrep is to integrate and articulate academic and technical subjects at the secondary and post-secondary levels, leading to an associate degree program while raising students' abilities in math, science, communication skills, and problem-solving skills. The typical course of study for the TechPrep education program is a minimum of two years of high school and at least two years of post-secondary education.²⁵¹ Currently, there are 108 local school districts affiliated with the TechPrep program, including 145 high schools. Post-secondary participants include all of the state's technical schools, 35 area centers, 14 community colleges, the regional universities and several private colleges. Secondary and post-secondary institutions combine to establish a TechPrep "site." In program year 1994-95, a total of 105 TechPrep sites were spread across the Commonwealth.²⁵²

More than 112,000 Kentuckians were enrolled in the state's technical education system in 1994. More than 80,000 participants enrolled in short-term and customized programs. Specific customized programs requested by business and industry trained more than 24,800 workers employed by more than 580 Kentucky companies. According to the 1993-94 Annual Report, companies and employees were served through more than 1,670 programs including technical training, skills improvement and quality management.²⁵³ Through agreements between the Department for Technical Education and the industry being served, customized training is provided by Kentucky Tech on a cost-recovery basis. That is, industry purchases the training at cost. Of the more than 1,670 customized training programs provided by the Department for Technical Education, approximately 36 percent were totally or partially paid for with funding from the Bluegrass State Skills Corporation.

Office of Training and ReEmployment. The Office of Training and ReEmployment administers programs associated with the Federal Job Training Partnership Act (JTPA) program. In 1994, the General Assembly passed Senate Bill 195, which transferred all JTPA programs and related activities to the Cabinet for Workforce Development from the Department of Employment Services.²⁵⁴ The JTPA program provides participants with on-the-job training, pre-employment training, assessment, counseling, job placement services, remedial and basic education, and work experience. Service providers for JTPA programs and affiliated services include the Department of Adult Education and Literacy, the Department for Technical Education, correctional facilities, school districts, the university and community

²⁵⁰ Commonwealth of KY.

²⁵¹ KY Cabinet for Workforce Development, Dept. for Technical Education. (1993).

²⁵² KY Cabinet for Workforce Development (1994), 63.

²⁵³ Kentucky Cabinet for Workforce Development, Office of Development and Industry Relations. (1994). Workforce Training & Development: Business and Industry Customized Training. 1993-1994 Annual Report, Frankfort, KY.

²⁵⁴ This transfer occurred before DES was transferred to the Cabinet for Workforce Development.

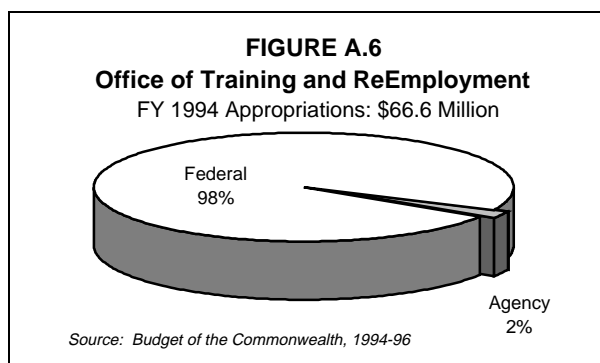
college systems, community-based organizations and on-the-job training contracts with private employers.

The JTPA program consists of several sections, each with its own budget and target population. For example, Title II provides job training and services to the economically and socially disadvantaged and others facing barriers to employment, as well as programs for youth and unskilled adults to prepare them for entry into the labor force. Title III, the Dislocated Worker program, provides job search assistance, occupational training, on-the-job training, and relocation assistance to workers who have lost their jobs or anticipate losing their jobs due to layoffs, plant closings, or economic conditions. Title IV, which was not funded in FY 1994, provided job training and services to Native Americans, migrant and seasonal workers, and veterans.

Title II is divided into several sections to target specific groups. Title II-A, the Adult Training program, provides training and services to economically disadvantaged adults. At least 65 percent of participants have an additional barrier to employment, such as a deficiency in basic skills or school dropout history. Title II-B, the Summer Youth program, provides job training and services during the summer to individuals ages 14 through 21 years who are economically disadvantaged or eligible for free meals under the National School Act. Title II-C, the Youth Training program, is similar to Title II-B, however, the emphasis is placed on improving the long-term employability of participants. Participants are individuals ages 16 through 21 years, with special state provisions for in-school youth who are 14 or 15 years of age.²⁵⁵

In FY 1994, the state's JTPA program was budgeted through the Division of Employability Development and Training Services, Department of Employment Services. Appropriations for the JTPA program amounted to more than \$66.7 million in FY 1994. Federal grants for JTPA totaled more than \$65 million, almost 98 percent of all appropriations.²⁵⁶ Federal grants are distributed to the

state through the Office of Training and ReEmployment, which is required to spend 80 percent of the grant within one year and all of the grant within three years.²⁵⁷ The Governor's Council on Vocational Education reports that more than \$50 million was available for JTPA to be spent in program year 1993-94.²⁵⁸ A total of 28,095 persons were served through the JTPA program in that year.



²⁵⁵ Governor's Council on Vocational Education. (1995). Biennial Report on the Carl D. Perkins Vocational Education Act and the Job Training Partnership Act, Frankfort, KY.

²⁵⁶ Commonwealth of KY.

²⁵⁷ Gaunce, W.H. (1995, August 23). Executive Director, Office of Training and ReEmployment. Personal communication.

²⁵⁸ Governor's Council on Vocational Education, 31.

The Office of Training and ReEmployment does *not* provide direct training to JTPA participants. Instead, service providers are contracted through 11 service delivery areas (SDAs)

TABLE A.1		
JTPA Funding, 1993-94		
Type of Funds	Amount	No. Served
Title II-A Allocation	\$18,219,468	3,299
Title II-A Carry In	\$2,924,847	-----
Title II-B	\$12,994,388	9,090
Title II-C Allocation	\$11,783,340	9,216
Title III	\$4,385,427	6,490
Total	\$50,107,470	28,095
<small>Source: Governor's Council on Vocational Education.</small>		
<small>*Note: This number includes 77 percent of the persons served through Title II-A. The remaining 23 percent of persons served through Title II-A are listed under the Title II-A Allocation.</small>		

located throughout the state. Each SDA is responsible for negotiating contracts and monitoring programs in its area. In addition, each SDA is paired with a private industry council whose members are appointed by the chief elected official in the SDA. Private industry councils are comprised of local business leaders, non-governmental managers, and representatives of community-based organizations, including labor, education, economic development, and public employment agencies.²⁵⁹ The function of the private

industry council is to provide policy direction and supervision of job training and related services conducted within their SDA.

SDAs and private industry councils are provided administrative guidance by the Kentucky Job Training Coordinating Council (KJTCC). The KJTCC reviews and evaluates all programs and services associated with the state JTPA program. The KJTCC also serves as a coordinator and advisor to all levels of program implementation and everyone actively involved in administration, including local agencies, service providers and the Governor. Members of the KJTCC are appointed by the Governor from business and industry, government, job training participants, and the general public.

THE BLUEGRASS STATE SKILLS CORPORATION

The Bluegrass State Skills Corporation (BSSC) awards grants on an assessment of need; therefore, funds are not allocated exclusively on a per-person scale, but rather on a holistic evaluation of each company. The cost of training individuals is just one of several scoring criteria used to appraise grant applications. The BSSC gives preference for programs that train for jobs with wages of more than \$7.00 per hour, though there is not an effective wage floor. Other factors such as the existing skill level among workers, the type of training, the regional location of the company and the industry's technology help to determine the level of funding. According to Kenneth M. Carroll, Executive Director of the BSSC, a needs-assessment approach allows a more precise accounting for the marginal costs to the firm of training each individual, which in turn yields a more efficient allocation of state resources.²⁶⁰ Since the cost of training workers is just one of many categories by which an application is judged, the approval process is more than a bidding war among those companies that are able to train at a low cost.

The BSSC administers programs that are commonly classified under three broad categories: pre-employment assessment and training, post-hire skills upgrade and training, and train-the-trainer programs. Pre-employment assessment and training programs provide individuals with short-term orientation and exposure to jobs and skills that potentially lead to immediate employment. Only eight of the 242 skills training projects funded by the BSSC in

²⁵⁹ Governor's Council on Vocational Education, 29.

²⁶⁰ Carroll, K.M. (1995, July 24). Personal communication.

FY 1994 were classified as pre-employment programs, however, pre-employment training projects are often extensive and well-attended. For example, Dynamec, Inc., a producer of automobile seat recliners in Wilmore, arranged a pre-employment skills training program with a Kentucky Tech facility for 49 trainees covering various topics such as company orientation, safety, basic blueprint reading, basic math and record keeping. The BSSC spent approximately \$2,700 on the project, with Dynamec providing a \$14,000 match.

In most pre-employment programs, not all trainees are able to gain employment with the training company. Thus, the BSSC requires the training company to place a certain percentage of each program's enrollees into employment—75 percent of pre-hire trainees and 25 percent of assessment trainees. The BSSC also requires that pre-employment training program operators cooperate with other support agencies involved in job development, training, and placement such as the Department for Employment Services and the Department for Technical Education.²⁶¹

Skills upgrade and training programs target current employees. They are the most popular among BSSC programs, accounting for almost 80 percent of all grants awarded in 1994. These programs provide employees with skills that enhance their job performance and improve the likelihood of job retention. Skills upgrade programs are often necessitated by a promotion or wage increase, the introduction of new technologies or organizational structures into the workplace, or competitive pressures on the company. General Electric of Louisville received more than \$1.3 million in BSSC grants between 1991 and 1994—one of the largest grant allocations in that three-year period—for skills upgrade training for almost 5,600 trainees in such areas as tool and die, safety, work teams, manufacturing classes, new product/process upgrades and maintenance.²⁶²

Train-the-trainer programs are also provided for new or expanding industries. Industries designate an employee to undergo instructional training so he or she may provide instructional training to other employees. The employee may receive instructional training outside of Kentucky, the United States, or at any location designated by the company and the educational institution, with the stipulation that any out-of-area training be conducted at the nearest and best possible location. Most often, the BSSC approves requests for out-of-state training because the company-specific technology is located in another state. Such was the scenario for the Sumitomo Electric Wiring Systems, Inc., of Morgantown. In 1994, Sumitomo received more than \$5,200 in BSSC grant money to send eight trainees to Japan for training on equipment, quality assurance and production. Sumitomo contributed more than \$76,000 for the training venture.²⁶³

²⁶¹ Bluegrass State Skills Corporation, Kentucky Cabinet for Economic Development (BSSC). (1995, July). The BSSC grant-in-aid guidelines for a program of skills training, Frankfort, KY.

²⁶² BSSC. (1994). Annual Report, FY 1993-1994, 36.

²⁶³ *Ibid.*, 21.

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